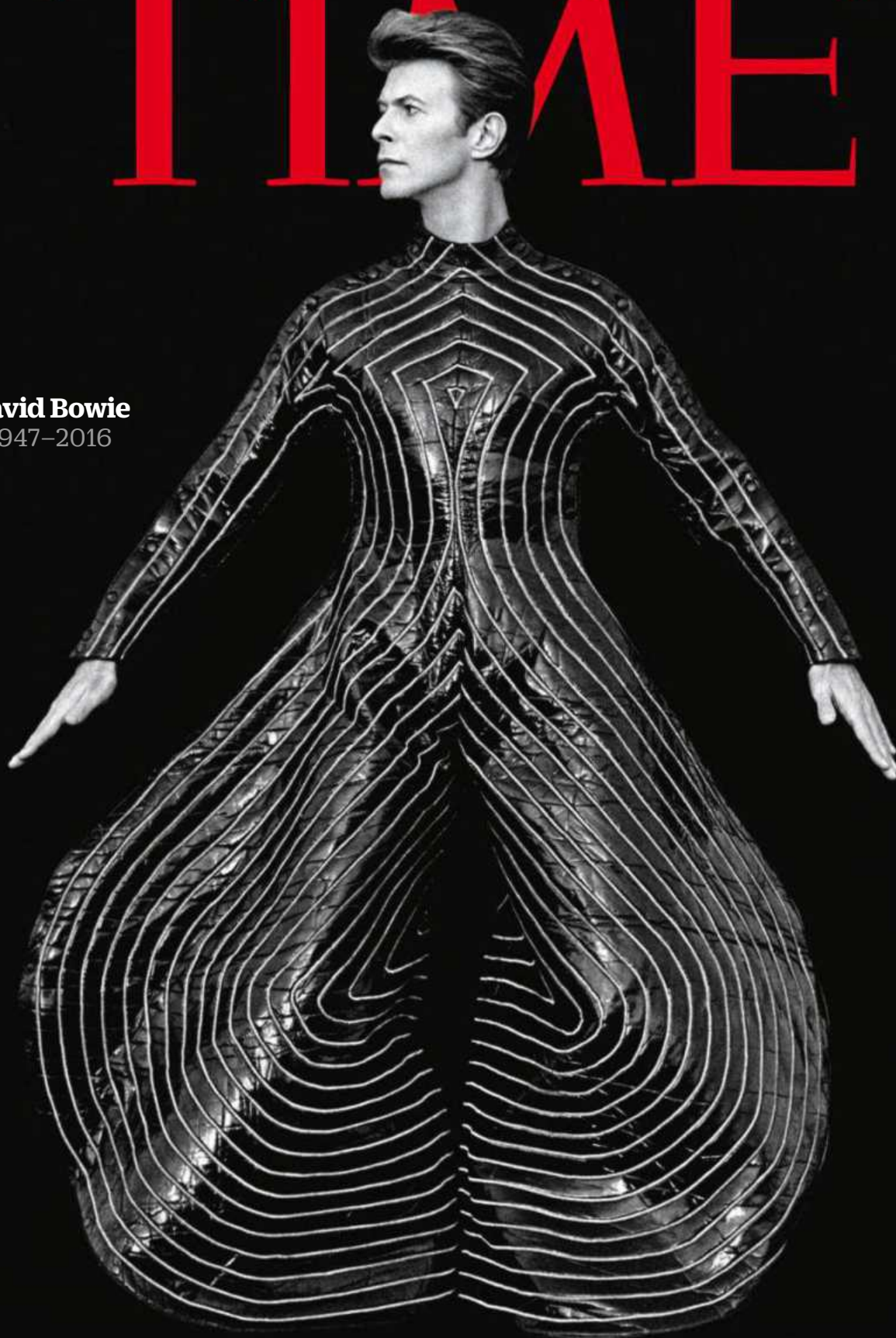


# TIME

**David Bowie**  
1947–2016



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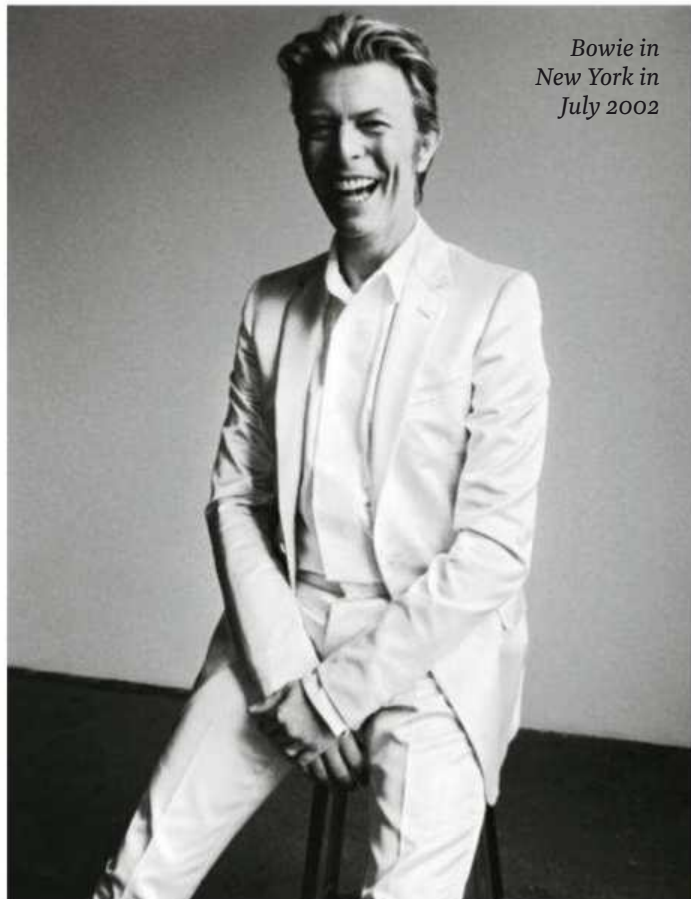
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Rock's master of disguise inspired millions to be themselves

By Isaac Guzmán 52



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Paul Giamatti in *Billions*, page 59



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## What you said about ...

**WHY TRUMP IS AHEAD** In TIME's Jan. 18 cover story, editor-at-large David Von Drehle outlined how Donald Trump had cannily bypassed traditional political and journalistic power brokers in favor of self-funding and social media. The feature drew praise from readers like Isaac Weingart of Northridge, Calif., who called it "the most thoughtful and persuasive piece I've read on why Mr. Trump is almost immune from critical analysis."

Responses were more mixed on the subject of the candidate himself. Although Don Mitchell of Indianapolis was jubilant ("Finally! A politician who doesn't mimic a party line"), many worried about Trump's success. "Could this be the end of our great country?" wondered Peter Gallivan of South Hadley, Mass. And Mike Barr of Akron, Ohio, said Von Drehle's analysis "was expressed far more succinctly by H.L. Mencken: Nobody ever went broke underestimating the intelligence of the American public."

'Take it out in 4 years and read it again! Just watch ...'

DONALD TRUMP, on Twitter

'[Making a Murderer] is not ... to be scorned as something simply to inspire armchair detectives. It is clinical and dedicated journalism.'

FLANNLEVI, on TIME.com

**TRUE-CRIME DRAMA** Daniel D'Addario's look at the danger of treating true-crime docuseries like Netflix's *Making a Murderer* as sources of objective news sparked a lively debate on TIME.com. "Regardless of [Making a Murderer subject] Stephen Avery's guilt (of which I'm sure)," wrote alis87, "actually the most important issues that the film raises are the wider systemic faults in the legal system, of which this is a great example."

## Back in TIME

July 18, 1983 **DANCING TO THE MUSIC**



### BOWIE ON BOWIE

"There is no definitive David Bowie," the rocker is said to have remarked.

In 1983, TIME explored the constant reinvention of David Bowie, who is remembered in this issue. Read more at [time.com/vault](http://time.com/vault).

**THE NEWS** The commercial and critical success of *Let's Dance*, Bowie's first album in three years.

**THE CONCLUSION** Citing Bowie's confidence in exploring new genres and looks, TIME's Jay Cocks called him "the perpetual Next Big Thing" with "two of the prime qualities every high-flying avatar needs: a restless imagination and a roving eye."

### BONUS TIME

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**NOW ON TIME.COM** TIME's health team looked at how real American nutrition-survey results stack up against the new dietary guidelines just released by the government. Read the results at [time.com/diet-gap](http://time.com/diet-gap).



### DAIRY

86% of Americans consume **less** than the recommended **3 cups of dairy** per day.



### PROTEIN

58% of Americans consume **as much as or more** than the recommended **5½ oz. of protein** per day.



### VEGETABLES

87% of Americans consume **less** than the recommended **2½ cups of vegetables** per day.

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# 'A president with the gifts of Lincoln or Roosevelt might have better bridged the divide.'

PRESIDENT OBAMA, saying during his final State of the Union address that "one of the few regrets" of his presidency is that "the rancor and suspicion between the parties has gotten worse instead of better."



'SECRETARY CLINTON AND HER CAMPAIGN NOW KNOW THAT SHE IS IN SERIOUS TROUBLE.'

BERNIE SANDERS, Democratic presidential candidate, as signs that Sanders was closing the gap against front-running rival Hillary Clinton in Iowa and maintaining his lead in New Hampshire led to mounting attacks from Clinton



**Main Street**  
The economy added 292,000 jobs in December to cap a year of job growth

MAIN ST



**Wall Street**  
Market chaos in China hammered U.S. stocks in their worst week since 2011

7,500

Weight in pounds (3,400 kg) of candy that a California man allegedly stole from Mars Inc.



'HIS STAR WILL SHINE IN THE SKY FOREVER.'

PAUL MCCARTNEY, on singer and songwriter David Bowie, who died Jan. 10 at 69



'These terrorists [are] targeting the whole of civilization.'

AHMET DAVUTOGLU, Turkish prime minister, after a suicide bomber killed at least 10 people in Istanbul



54.4

Average temperature, in degrees Fahrenheit (12.4°C), for the U.S. in 2015, making it the second-hottest year on record



\$200 million

Listing price for the storied Playboy mansion, which the company put up for sale amid declining circulation; a buyer would have to agree to let Playboy founder Hugh Hefner continue living there as a condition of the sale

# The Brief

'EVERYBODY IS TALKING ABOUT SILICON VALLEY DISRUPTING THE CAR BUSINESS. WE'RE GOING TO DISRUPT OURSELVES.' —PAGE 14



Mexican soldiers escort Joaquín Guzmán upon his arrival in Mexico City after his arrest on Jan. 8

## MEXICO

### The arrest of the drug lord El Chapo isn't the victory it looks like

By Ioan Grillo/Mexico City

JOAQUÍN “EL CHAPO” GUZMÁN BECAME the world’s most powerful drug lord with few ever hearing his voice. He preferred to be known through his actions, which were lionized in *narco-corrido* folk songs and recorded in U.S. federal indictments. There were the trails of bodies and bribes he left across two countries, the tons of cocaine, amphetamines, heroin and marijuana he shipped north, the two cinematic escapes from high-security Mexican prisons and the billion-dollar criminal empire backed by an armed militia. Communities as far away as Chicago recognized his accomplishments, naming him the first Public Enemy No. 1 since Al Capone.

Then on Jan. 8, the ballad of Guzmán got a new verse. After a bloody shoot-out with the Mexican navy in the

seaside town of Los Mochis, the gangster known as Shorty escaped through rain-soaked sewers and hijacked two cars, only to find himself once again in federal custody. “Today Mexico confirms that its institutions have the necessary capacity to confront and overcome those who threaten the tranquillity of Mexican families,” crowed Mexican President Enrique Peña Nieto.

But the government would not have the last word, for it was only then that El Chapo broke his silence—in the magazine *Rolling Stone* of all places, through an interview with the actor Sean Penn, in an article whose every word Guzmán had approved by agreement before publication. The message delivered by the world’s most wanted drug runner, who has been shopping his story for Hollywood treatment, was

as cutting as it was undeniably true. “People who dedicate their lives to this activity do not depend on me,” he said of the industry that satiates the illicit appetites of the American public. “The day I don’t exist, it’s not going to decrease in any way at all.”

No one who knows the ways of Guzmán and his kind would disagree. His Sinaloa cartel is not a top-down corporation but a federation of tens of thousands of criminals—farmers who grow opium poppies, marijuana and coca leaves; chemists who cook heroin, cocaine and meth; smugglers who get it all over the border; corrupt police officers who look the other way; and accountants who wash the money. The network began in Mexico’s Sinaloa state a century ago, some 40 years before Guzmán’s birth, after Washington restricted opium with the 1914 Harrison Narcotics Tax Act. “Drug trafficking is already part of a culture that originated from the ancestors,” Guzmán told Penn.

Today the network stretches from Sinaloa along a thousand miles of border, across the U.S. and as far afield as Colombia, the Philippines and Australia. Surviving a century of clampdowns, the traffickers have learned to compartmentalize into independent cells, honing their expertise. Guzmán, who boasts a fleet of submarines, said he sent his tunnel engineers to Germany for training. Surrounded by doting sons—and aided by a partner in crime, Ismael “El Mayo” Zambada, who remains at large—Guzmán long ago become more figurehead than dictator, his superstar status helping spread the influence of his cartel, which is only the largest of the roughly nine narcogangs that control whole areas of Mexico.

Even in handcuffs, he remains the most potent symbol of the drug war’s failure. With help from U.S. agents, Mexico has pursued what is known as the cartel-decapitation strategy for more than a decade, nabbing or killing capos with nicknames like “The Viceroy,” “The Maddest One” and “The Executioner,” as if cutting off the heads of snakes.

But the river of poison flowing north has not waned. Data from the Customs and Border Patrol shows no drop in the amounts of narcotics that agents on the southwest border have seized over the past decade—2.2 million lb. in fiscal year 2006 compared with 2.14 million lb. in 2015. Even the levels of violence between the cartels had no real impact on the smuggling operations. In 2006, Mexican police reported 11,800 murders, which rose to 22,800 in 2011, and dropped back to 15,600 in 2014.

“The arrest of El Chapo is a short-term political victory,” says Mexican security specialist Raúl Benítez-Manaut. “But it doesn’t mean a real success in the war on narcotrafficking.” Just as bootleggers kept brewing after Capone landed in Alcatraz, the legend of Guzmán will continue, in song and blood, even if he never spends another day in freedom. □

## TRENDING



### MILITARY

Iran released two U.S. Navy patrol boats and 10 crew members a day after **capturing them “trespassing” in Iranian waters** near a major air base on Jan. 12. The Pentagon and State Department explained that one boat had mechanical difficulties during a routine mission.



### POLITICS

Democratic presidential candidate Hillary Clinton **proposed a 4% surtax on Americans earning more than \$5 million a year** and pledged not to raise taxes on families making under \$250,000. Her campaign said the plan could raise \$150 billion over 10 years.



### LAWSUITS

French National Front founder Jean-Marie Le Pen is suing dancer Brahim Zaibat **for taking an unflattering selfie with him while he slept on a plane** on the eve of local elections in December. The politician claims the photo, which went viral, contributed to his party’s defeat.

## ROUNDUP

## Royal pains in the headlines

On Jan. 11 Princess Cristina of Spain became the first member of the country’s royal family to go on trial, charged with two counts of tax fraud. Here are a few other royals caught up in very public troubles:



### PRINCE ANDREW OF BRITAIN

Queen Elizabeth’s second eldest son resigned as the U.K.’s trade envoy in 2011, after criticism over his friendship with billionaire sex offender Jeffrey Epstein, and meetings with members of corrupt regimes like Libya’s, Tunisia’s and Azerbaijan’s.



### THAI PRINCESS SRIRASMI

At least six relatives of Srirasmee, royal consort to Thailand’s Crown Prince Maha Vajiralongkorn, were arrested in 2014 for abusing their royal-family status for money. In the wake of the scandal, Srirasmee gave up her title and she and the prince divorced last year.



### KING JUAN CARLOS OF SPAIN

The King renounced his yacht *Fortuna* as Spain tightened its belt in 2013 but received blowback when a court ruled the crew had been dismissed illegally and taxpayers would have to cover the €1.2 million (\$1.3 million) costs.



### QUEEN FABIOLA OF BELGIUM

The late dowager Queen was forced to backtrack in 2013 on plans to set up a foundation to bequeath money to her relatives and charities, after being accused of attempting to dodge estate taxes in her homeland.

## DIGITS

9%

Share of the top 250 Hollywood films **directed by women** last year, according to a new study; it’s an improvement on 2014, when only 7% of the top movies had female directors.





**TERRORISM IN TURKEY** Footage from a tourist's camera captures the moment a suicide bomber detonated explosives in the heart of Istanbul's historic district on Jan. 12. The explosion near the Obelisk of Theodosius at Sultanahmet Square killed 10 foreigners, all German tourists, and wounded at least 15. Turkish authorities identified the bomber as a Saudi member of ISIS who had been living in Syria. *Photograph by Depo Photos/ZUMA Wire*

## EXPLAINER

### Germany's new migrant crisis threatens Merkel

ATTACKS BY GROUPS OF MAINLY IMMIGRANT men in Cologne on hundreds of people on Dec. 31 have sparked outrage in Germany and fueled debate over the *Willkommenskultur* ("welcome culture") toward refugees championed by Chancellor Angela Merkel. Growing tensions have presented Merkel and Germany with fresh challenges:

**THE RISING RIGHT** Anti-immigrant sentiment has devolved into open unrest in Cologne since the year began. A march by the antirefugee Pegida movement on Jan. 10 ended in clashes with the police, and gangs have attacked Palestinian and Syrian men. A Pegida rally in Leipzig also led to rioting and 211 arrests.

**LEGAL CRACKDOWN** The situation in Cologne, along with news that an Islamist extremist who tried to attack a Paris police station on Jan. 7 had

lived in a German refugee shelter, moved Merkel's government to tighten laws governing refugees. The Chancellor has backed measures that would allow lawbreaking asylum seekers to be deported more easily, but she continues to refuse calls from her rivals and coalition allies to cap refugee numbers this year at 200,000.

**FALLING POPULARITY** Merkel's approval ratings have dropped 17 points since April by one measure, as Germany struggles to resettle the 1.1 million migrants who arrived in 2015. Anxiety over the attacks could bolster the anti-immigration Alternative for Germany (AfD) party ahead of local elections on March 13. Although support for Merkel within her CDU party remains steady, a poor showing in March would raise questions about her leadership. —JULIA ZORTHIAN



◀ *Merkel will not cap migration into Germany as unease over her refugee policies rises*

## DATA

### THE HUMAN COST OF RIGHTS FIGHTS

In the first 11 months of 2015, 156 human-rights activists were killed or died in detention globally. Here's a sampling of the 25 countries where fatalities occurred:



**54 dead**  
Colombia



**31**  
Philippines



**9**  
Brazil



**7**  
India



**4**  
Sudan



**2**  
Egypt

SOURCE:  
FRONT LINE DEFENDERS

## THE RISK REPORT

presented by



# What traders don't know about China could hurt them

By Ian Bremmer

WITH THIS YEAR'S EARLY MARKET GYRATIONS, IT'S natural to wonder how China moved from inspiring confidence to exporting dread. But never before have international investors depended so heavily on a force they know they don't understand.

In 1977, China accounted for about one-half of 1% of world trade. Thirty-five years later, it had surpassed the U.S. to become the world's largest trading nation. Countries in every corner of the world now count on Beijing and its economic engine for their expansion plans, while the U.S. has become China's No. 1 trading partner. China has accounted for about one-third of global growth over the past seven years, and one day soon it will have the world's largest economy.

Yet China's growth has begun to slow as reform shifts the maturing economy from its dependence on exports to a more sustainable reliance on domestic consumption. Wages have been rising in China, which has helped produce a massive middle class even as it has made it tougher for the country's manufacturers to dominate trade as they have. Outsiders know this, but they don't know how quickly growth will decline—nor do they have real confidence in government statistics. Given the size of China's global footprint, that's a source of considerable anxiety.

**THAT DOESN'T MEAN** it's easy to understand why a sharp drop in China's benchmark stock index to open the year has spooked international markets so badly. After all, the Shanghai Composite, China's benchmark index, has little connection to China's real economy. It's hardly a secret that China's government periodically boosts the market with large infusions of cash or with little warning sets new rules that limit the ability of investors to sell when things go south. Last summer, the index fell 32% in less than four weeks, but only after a climb of more than 150% over several months. Nor is the Shanghai index well connected with international markets. Foreigners own just 1.5% of shares in it.

But behind the stock-market roller coaster are real concerns. A surprise currency devaluation and continued downward drift in the value of the yuan against the dollar have investors concerned that some of China's trade partners will have to devalue their own currencies to avoid losing a competitive commercial advantage. That could trigger a currency war that would ravage global trade.

These fears are overblown. China will continue to devalue its currency, but not enough to trigger a currency war. More important, China's slowdown remains



*China's foreign-trade volume declined in 2015*

manageable. Local governments and state-owned enterprises are loaded with debt, but the central government has more than enough cash on hand to stimulate the economy as needed to avoid a hard landing. The leadership has the means and the will to implement emergency measures—even if it means setting the economic-reform process aside temporarily.

The state will continue to play a heavy role in China's investment environment. Its financial system is only partly open, its currency is not moved by market forces, and its political decision-making takes place behind closed doors. China remains a crucial player in global trade and investment, with partners on every continent. But it is a black box, leaving investors to wonder how they can build a winning strategy when the rules of the game are subject to sudden change.

At the same time, outsiders are beginning to doubt whether China's

leadership knows what it's doing. Its currency revaluations have been mismanaged at times, encouraging suspicion rather than confidence. The swings in the Shanghai market have been handled clumsily, with the government imposing and quickly abandoning the circuit breakers that shut down markets in free fall—a move that perversely encourages the panic selling it's meant to stem.

Any sign of trouble in China, no matter how insubstantial, will provoke an outside reaction, because people don't like feeling dependent on something they simply don't understand. We now live in a world where the soon-to-be-largest economy is a poor country—China's per capita GDP is seven times smaller than the U.S.'s—that many fear is potentially unstable. China is much stronger than the past couple of weeks would lead you to believe—but that will be little comfort to traders in the middle of a market panic. □

# LIFE ON PLANET EARTH IS GETTING BETTER, **THANKS TO GLOBAL TRADE.**

Big businesses and small are helping the world's economies to flourish. New found wealth brings better health (the average person lives one third longer than 50 years ago) and education (today 90% of kids in developing regions of the world go to primary school). This is the power of global trade. Of course there's still a long way to go, but one delivery at a time, the more we keep on trading the better it's going to get for everyone, everywhere. Read more online.

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## TRENDING



### HUMAN RIGHTS

On Jan. 11, a convoy carrying food, medicine and baby formula reached the Syrian town of Madaya, which had been cut off for six months by a government blockade that left its 40,000 residents without aid. Locals say they ate leaves and stray animals to stay alive.



### HISTORY

A new annotated edition of Adolf Hitler's *Mein Kampf* sold out after hitting German bookstores for the first time since 1945, with 15,000 advance orders made against a print run of 4,000. The book's copyright expired on Jan. 1, 70 years after its author's death.



### ENVIRONMENT

Michigan Governor Rick Snyder called in the National Guard to help distribute aid in Flint on Jan. 13, after declaring a state of emergency over the city's water supply, which was found to contain dangerous levels of lead after officials changed its water source in 2014.



Ryan Seacrest with Ford chairman Bill Ford Jr. and CEO Mark Fields

## SPOTLIGHT

# Automakers want to sell you much more than just a car

SO MUCH FOR THE SIREN SONG OF HORSE-power. At the North American International Auto Show, which opened Jan. 11 in Detroit, traditional auto virtues—power, speed, handling—were overshadowed by talk of apps, connectivity and vehicles that leave the white-knuckling to algorithms. To be sure, automakers spent plenty of time showing off glitzy new models. But most seem to be grappling with the same existential questions, namely the matter of when and how the industry will be disrupted.

Ford CEO Mark Fields took the issue head-on by unveiling a strategy to transform the iconic company. He said Ford would continue to build and sell cars as it traditionally has but would also turn itself into a “mobility” provider through apps and services that offer ride sharing, transportation assistance and new types of leasing. “Everybody is talking about Silicon Valley disrupting the car business,” said Fields. “We’re going to disrupt ourselves.”

Silicon Valley's ambitions are a growing preoccupation for old-line automakers. To wit, Fields spent time outlining the ways in which Apple transformed itself over the past 18 years, upending the music and phone markets along the way. His point: Ford doesn't plan to let California firms do the same to it.

Not that the car business is ailing. The

automotive industry sold more new cars and trucks in 2015 than ever before. In the U.S., manufacturers sold some 17.5 million light-duty vehicles, a 5.7% increase from the previous year.

But the convergence of several trends—autonomous cars, electric power and the new business models of startups like Uber—amount to so much writing on the wall. The

**‘Everybody is talking about Silicon Valley disrupting the car business. We’re going to disrupt ourselves.’**

MARK FIELDS, Ford CEO

global car business is worth \$2.3 trillion annually. By comparison, the transportation-services market—everything from cabs to trams—is worth over twice that and is likely to surge as the world urbanizes in coming years.

The real difficulty is which bet to place. General Motors is investing \$500 million in Uber rival Lyft, with an eye toward developing a fleet of self-driving vehicles that would arrive with the tap of an app. Toyota executives recently told the *Financial Times* that personal robotics might eventually outshine the Japanese firm's auto business. And during a press conference at the show, Volvo CEO Hakan Samuelsson pledged that “no one should be killed or seriously injured in a new Volvo by 2020,” a goal made possible by autonomous technology.

In other words, there is consensus forming on one thing: the road ahead will have bountiful curves. —MATT VELLA/DETROIT

## Milestones

### ANNOUNCED

By **Ringling Bros. and Barnum & Bailey**, that it will retire elephants from its circus acts by May, in response to concerns from animal-rights activists. Its 11 elephants will be relocated to a conservation center in Florida.

### APPROVED

By the NFL, a plan for the **St. Louis Rams** to move back to Los Angeles next season, 21 years after leaving the city. The San Diego Chargers may follow.

### APPOINTED

**Arlene Foster**, 45, as Northern Ireland's First Minister. She is the first woman ever to hold the province's most senior position.

### DIED

**André Courrèges**, 92,

French designer who created space-age fashions in the 1960s and, along with Mary Quant, pioneered the miniskirt. He was known for A-line dresses, go-go boots and dressing Jacqueline Kennedy Onassis, Catherine Deneuve, Brigitte Bardot—and more recently Miley Cyrus.

### ANNOUNCED

By **Campbell's Soup**, that it will label GMO ingredients in its products, becoming the first major food company to do so. Campbell is also calling for a mandatory federal GMO-labeling system.

### ENGAGED

Thrice-wed media mogul **Rupert Murdoch**, 84, and model **Jerry Hall**, 59.



*A Ringling Bros. elephant in 1963. The signature act will no longer be part of the circus*

## PRIMER The Zika virus



The Centers for Disease Control and Prevention has confirmed the first recent case in the continental U.S. of the Zika virus—which has been linked to serious birth defects in infected pregnant women—in Houston. Here's what to know.

### ORIGIN

The latest batch of cases were detected in Latin America; it's primarily spread by infected mosquitoes.

### SYMPTOMS

People can develop a fever, a rash and red eyes, as well as muscle pain, headaches and nausea.

### PREVENTION

Using insect repellent can protect against mosquito bites.

### LONG-TERM RISK

For most people, it's very low: only about 1 in 5 people who are infected actually get sick, and symptoms typically clear up within a week with rest and fluids.

—Alice Park



By Zeke J. Miller, Philip Elliott and Sam Frizell



### Chelsea attacks

The former First Daughter traded her gauzy, feel-good platitudes for a low blow against Bernie Sanders in New Hampshire, saying he wants to “dismantle” Obamacare, Medicare and private insurance; in fact he supports incorporating those programs in a new federal system. Clinton family mudball returns.



### King of Des Moines

Marco Rubio's boots are made for walking, leading rivals to mock all the time he spends around populous Des Moines and in Iowa's eastern cities. It's more strategy than convenience: the Senator wastes little energy on the more religious rural voters who are backing Ted Cruz.



### Clinton + Iowa = ?

Hillary Clinton aides fear the wacky rules of the Iowa Democratic caucus will overstate Sanders' true support on Feb. 1, since some precincts could award delegates to candidates who do not actually win. The deadlocked Iowa polls suggest Clinton should feel lucky with any outcome short of a humiliating loss.



### Boos for Cruz

After Donald Trump began questioning whether Canadian-born Cruz was eligible to be President, GOP boss Reince Priebus refused in an interview with TIME to back Cruz's eligibility, and Iowa Governor Terry Branstad joined Senator John McCain in calling it a valid issue. The case law aside, it's a sign of how many party leaders dislike Cruz.

# The ongoing California natural-gas leak is a disaster for the planet

By Justin Worland

THE COMMUNITY OF PORTER RANCH LOOKS LIKE ANY other prosperous Los Angeles suburb: green lawns, tree-lined streets, three-car garages. But in the hills behind houses that might have sold for a million dollars just months ago, an estimated 65,000 lb. of methane gas per hour is spilling from a 7-in. hole in the ground, forcing thousands of people to flee their homes and polluting the climate—and it's all invisible.

The rupture in an underground pipe linking one of the country's largest natural-gas storage reservoirs, known as Aliso Canyon, to the earth's surface has created one of the worst environmental disasters in recent memory. And the leak, which began in October, will take months more to fix. Children in the area have experienced headaches, bloody noses and vomiting. The Federal Aviation Administration declared the area a no-fly zone out of concern that an aircraft might ignite the highly flammable invisible natural gas. California Governor Jerry Brown declared a state of emergency this month.

The accident may be unique in its enormous scale—one day of the leak warms the climate at a rate equivalent to driving more than 4.5 million cars for a day—but it's just one of thousands of leaks plaguing the country's vast natural-gas system. Wear and tear on the system has worsened in recent years as new fracking technology has greatly expanded the area being drilled. The boom has generally been a good thing—natural gas burns cleaner than coal, and the promotion of gas has been a key part of Obama's climate program. But natural gas's green credentials are diminished by leaks. And new research shows that leaks are uncomfortably common.

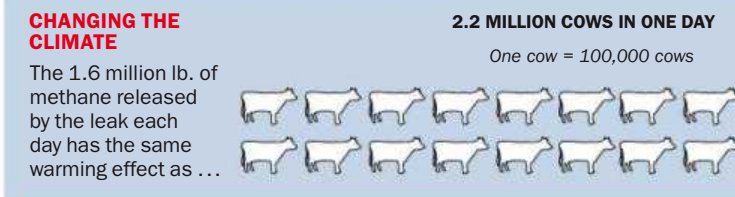
It's not clear what caused this leak. Industry experts point to the age of the Aliso Canyon storage facility—it's more than 60 years old—as well as equipment that, while meeting regulatory requirements, has not been updated in decades. What's clear is that the Southern California Gas Co. was slow to recognize the scale of the disaster after it discovered the leak in late October. The company first tried to plug the leak by filling the well's shaft with fluid. But the pressure of the gas as it pushed up from the ground was simply too strong.

The company acknowledged in December—after an estimated 50,000 metric tons leaked—that it had no alternative but to drill a relief well. The process, similar to the method ultimately used to stop the 2010 BP oil spill in the Gulf of Mexico, involves drilling a new well that curves around and intercepts the leaky well deep underground. Engineers will then fill the relief well with mud and fluid intended to seal the original well. Southern California Gas says the operation should be done by March. “We share everyone's concerns about this leak's ongoing impact on the community and environment, and we are working as quickly and as safely as possible to stop it,” says Gillian Wright, a customer-service executive for the company.

That's a time frame that pleases no one. Porter Ranch resi-



**Runaway** The Porter Ranch leak will take months longer to fix



**‘This is the beginning. We’re going to see this all over the place.’**

R. REX PARRIS,  
attorney for  
Porter Ranch  
residents

dents say they’ve experienced a slew of short-term illnesses they connect to the gas spill. Property values have plummeted. Environmentalists warn that the longer the leak goes on, the bigger the impact all that methane—a more powerful greenhouse gas than carbon dioxide—will have on the climate.

But the gas company argues, and engineers who work on drilling projects agree, that there’s simply no way to fix the well faster. “This is very big and complex,” said Timothy O’Connor, director of the Environmental Defense Fund’s California oil and gas program. “Does that mean you get a free pass because your leaks are very difficult? Or

## WHAT'S BEING DONE TO STOP IT

### STEP ONE >

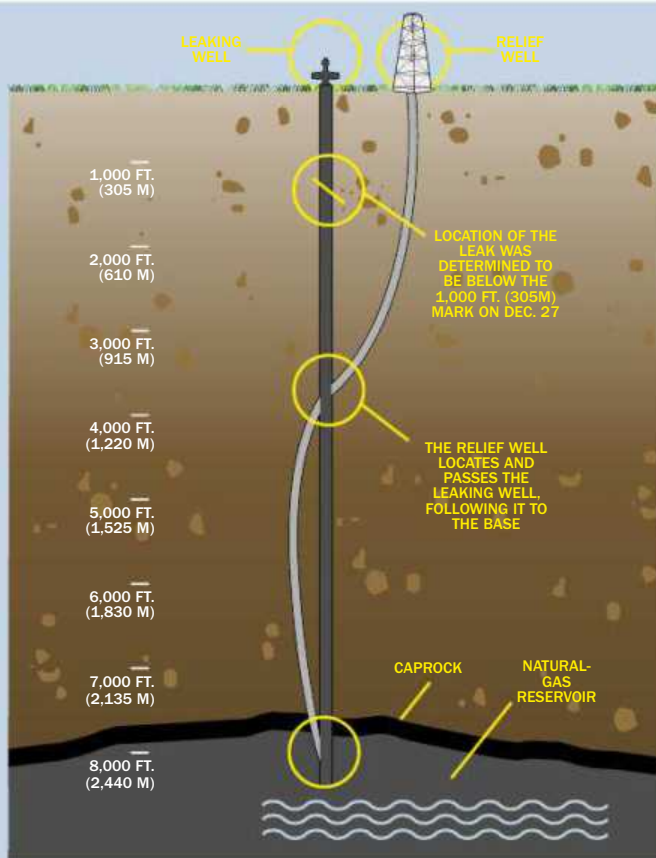
Drill a new relief well near the leaking well.

### STEP TWO >

Locate the leaking well underground and continue drilling the new well roughly parallel to it.

### STEP THREE >

The relief well will intercept the leaking well at the natural-gas reservoir. Mud and fluid will be pumped into the relief well to stop the flow of gas before it is plugged with cement.



## \$12 million

Total market value of natural gas lost so far in the Porter Ranch leak

## 2,292

Number of families relocated from the Porter Ranch area because of the accident, as of Dec. 28

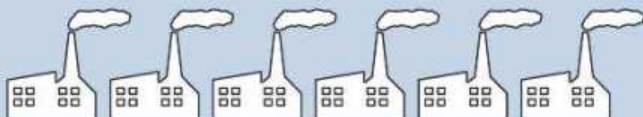


## 4,683

Number of applications for relocation in Porter Ranch



## THE EMISSIONS OF SIX COAL-FIRED PLANTS IN ONE DAY



## DRIVING OVER 4.5 MILLION CARS IN ONE DAY

One car = 1 million cars



does that mean you should be held to a higher standard of care?"

Aliso Canyon is not the only storage facility in the U.S. that is at risk of leaking. There are more than 400 natural-gas storage facilities fashioned out of former mines and other underground formations that together store some 3.6 trillion cu. ft. of natural gas. The gas is moved to U.S. homes, businesses and power plants through a vast network of pipes and service lines.

Adam Brandt, a Stanford professor who studies energy engineering, argues that such a complex system needs regular maintenance. "It's like going to the dentist and fixing problems while

they're small," he says. But much of the natural-gas network has operated for decades with little investment in efforts to inspect and update the system, while regulations are outdated and often lightly enforced. A full accounting for methane leaks is difficult to compile, but recent research has estimated that natural-gas-gathering facilities alone leak 100 billion cu. ft. of methane each year—more gas than the entire country burns in a day. Obama proposed new rules last year to reduce fugitive methane emissions from the power sector, but even if finalized—the rules face GOP and industry opposition—they would address only a small portion of total leaks.

The Porter Ranch spill may be a wake-up call. California launched an emergency rulemaking effort this month that requires the use of infrared technology to detect leaks—methane is visible on infrared video—and regular testing of safety valves used on wells. Without such efforts, energy- and environmental-policy makers may need to rethink how they use gas to fight climate change. "This is the beginning. We're going to see this all over the place," said R. Rex Parris, an attorney for displaced residents. "These wells are messed up just like our roads and bridges are messed up. But at least you can see that."

LightBox

## Angels on the gridiron

Lawrence Erekosima celebrates after his team, the Alabama Crimson Tide, defeated the Clemson Tigers 45-40 in the 2016 College Football Playoff National Championship Game on Jan. 11 in Glendale, Ariz. The win marks Alabama's fourth national title in the past seven seasons.

*Photograph by Harry How—  
Getty Images*

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# The View

'THE HUMAN BRAIN IS HARDWIRED FOR EXPLOSIVE VIOLENCE.' —PAGE 27



*U.S. officials want access to encrypted text messages, but it may not be worth the risk*

## TECHNOLOGY

### Why we can't unscramble the fight over encryption

By Haley Sweetland Edwards

JUST HOURS BEFORE TWO GUNMEN, armed with assault rifles, opened fire outside an exhibition space in Garland, Texas, last May, one of them exchanged a blizzard of texts, 109 in all, with a third person—someone the FBI later identified as an “overseas terrorist.” But that’s where the trail goes dark. What did the messages say? Was the overseas terrorist giving instructions? Were other targets or accomplices mentioned? “We have no idea what he said because those messages were encrypted,” said FBI Director James Comey, testifying before a Senate committee in December.

Technology known as end-to-end encryption, which is now embedded in apps like Apple’s iMessage and Facebook’s WhatsApp, makes it impossible to unscramble the content

of messages intercepted in transit between users. That means that no one—not even law-enforcement officials or the engineers who created the encryption in the first place—can peek at personal conversations, giving a measure of comfort to millions who trust technology to keep their personal secrets safe from hackers and criminals.

But federal officials say the cost of that security could show up in the next terrorist attack. Which is why some of the Obama Administration’s top brass and intelligence officials, including Comey, met in Silicon Valley on Jan. 8 with executives from Apple, Facebook, Twitter and Google. Among the agenda items was the question of encryption: Should tech companies be forced to equip their encrypted platforms with special “back doors” that

allow government agents, armed with court orders, to peer in when necessary? Both sides left the meeting mum, but the battle is hardly over. Top tech CEOs have repeatedly promised that they will do nothing to weaken customer protections, while law-enforcement officials insist that spying on suspected terrorists would help them head off horrific acts of violence, like those last year in Paris and San Bernardino, Calif.

It's a powerful emotional argument, and lawmakers from both parties, including Senators John McCain and Dianne Feinstein, have taken it up, promising new legislation to force companies to "pierce" encryption under court order. Most of the 2016 Republican candidates have lined up behind that idea too, arguing that government agencies ought to be given the same access to text messages and data on cell phones that they can get by wiretapping a landline. Meanwhile, Democratic candidates Hillary Clinton and Bernie Sanders have been more circumspect, calling for a balance between civil rights and national security.

The problem is that the nation has been down this road before—and it doesn't lead anywhere good. In the '90s, the federal government launched a criminal investigation against cryptographic whiz Phil Zimmermann, who had developed an early encryption technology, on the grounds that he was exporting a "munition" that could harm national security. In response, Zimmermann published his source code as a book, arguing that he had a First Amendment right to free speech. Eventually the feds backed down and appellate courts supported this claim for later cases. The takeaway? You can't outlaw encryption technology any more than you can outlaw cell phones. The truth is that any technology can be used for good or ill—but once the genie is out of the bottle, it's out forever.

Cryptographers and tech-company CEOs are making the same argument today for strong encryption. Even if every American device was stripped of protected code or fitted with a back door, they argue, Americans would be no safer. In fact, they would be less safe, since hackers, cyber-criminals or foreign agents could exploit the same back doors designed for law enforcement. Terrorists, meanwhile, could simply write new encrypted apps, or use different ones—like those made in Switzerland or Russia. It took me less than a minute to download and set up Threema, a Swiss encrypted messaging app, on my phone. Many of the top apps the Islamic State has recommended to its followers are not made in the U.S.

As cryptographer Bruce Schneier says, "I can't build technology that operates differently depending on your morality." It's an uncomfortable trade-off for a new century. And it's not going away anytime soon. □

## VERBATIM 'Doctor's visit—time for vaccines!'

MARK ZUCKERBERG, captioning a photo of his baby daughter Max, on Facebook. Although the post struck a nerve among anti-vaxxers (one likened Zuckerberg to a "mindless sheeple zombie"), many of the 88,000-plus comments commended the Facebook CEO for "being a smart person" and "doing what's best for [his] child and the community."



## THE NUTSHELL Zero Footprint

SINCE 2001, THE U.S. has hired hundreds of thousands of private military contractors (PMCs) and subcontractors in war zones, spending at least \$200 billion in the process. Who are these people, and what drives them to take on some of the riskiest work in the world? In his new book, longtime PMC and former Royal Marine Commando Simon Chase (an alias) writes that he and most of his peers are not "mercenaries and war profiteers"—as they're often portrayed in pop culture—but former military personnel working to protect and uphold the same values they did as soldiers. In Chase's case, that meant hunting Osama bin Laden in Tora Bora, securing evidence of chemical warfare in Aleppo and searching for American ambassador Chris Stevens in the smoke of Benghazi; Chase also cites colleagues who sacrificed their lives in order to protect top U.S. military officials. PMCs do "the dirty and dangerous jobs the military and intelligence services can't or won't do," he writes. By now, he adds, "we know not to expect parades and medals. But, in my opinion, all wounded and fallen PMCs... are unsung heroes in the war on terrorism." —SARAH BEGLEY



## CHARTOON Before Instagram



JOHN ATKINSON, WRONG HANDS

## SNAPSHOT

# The self-piloting helicopter

We have drones that record videos, fight fires and even deliver packages. EHang's 184 aims to one-up them all—by transporting a human. The all-electric creation, unveiled Jan. 6 at the CES tech show in Las Vegas, works much like a self-driving car: after specifying a destination, users hop in, sit back and enjoy the ride. Although EHang, based in Guangzhou, China, has successfully flown manned tests in its home country, safety remains a headwind; should the technology malfunction, there is no pilot to step in. Nonetheless, EHang plans to start selling the 184s this year in China, where drone regulations are less strict than they are in the U.S. CEO Huazhi Hu says they will cost \$200,000 to \$300,000. —Alex Fitzpatrick



## QUICK TAKE

# The science of why people 'snap' in anger

By Doug Fields

DESPITE THE PEACEFUL LIVES WE LIVE most of the time, the human brain is hard-wired for explosive violence. The neural circuits of rage react faster than the speed of thought. They have to. A mother, for example, will explode in violence to protect her child when the "hypothalamic attack region" deep in her brain senses a threat. We evolved these neural circuits for survival in the wild. We still need them.

But the modern world—with its wealth of stimuli—is utterly transformed from the environment in which our brain was designed to operate. This mismatch can lead to misfires. This month Shakira Green, 30, was arrested and charged with suddenly attacking her child's second-grade teacher, Rosalind Simmons, in a classroom in Palm Beach, Fla. And years ago, Donald Bell made headlines for shooting and killing another motorist, Timo-

thy Mann, in a Sacramento road-rage incident. (Two weeks later, he committed suicide.) This "snapping" is especially disturbing, because it can be triggered by seemingly benign acts, such as an offhand comment or gesture.

There is an upside, though. When it works as intended, the same neural circuitry that sparks rage can also spark stunning performances in fast-paced sports and selfless acts of heroism. "I didn't think," passenger Jasper Schuringa said in 2009, after he dived over rows of seats to subdue a terrorist attempting to set off a bomb on Northwest Flight 253. But he still acted smartly—and the rest of us can too. Understanding the brain's threat-detection system is the first step to exploiting and controlling it.

*Fields is the author of Why We Snap: Understanding the Rage Circuit in Your Brain*

## HOW TO PARENT LIKE AN FBI AGENT

Some spycraft techniques also work for parenting, says Jack Schafer, a psychologist, former FBI special agent and author of *The Like Switch: An Ex-FBI Agent's Guide to Influencing, Attracting, and Winning People Over*. Try these:

1

### CREATE THE ILLUSION OF CONTROL

FBI agents de-escalate drama by letting subjects call some shots. Offer kids a list of options, all of which you already like.

2

### USE THE SCARCITY PRINCIPLE

FBI profiling shows that people like things they can't get much of. Parents should factor that in when banning an activity or a friend.

3

### ASK INDIRECT QUESTIONS

Kids (and perps) hate being interrogated. Instead, try queries like "My friend's son was drinking. What should his parents do?"

4

### HANG IN THERE

The more time you spend with a person, the more influence you have on each other. Yes, even on teenagers. —Carey Wallace





VIEWPOINT

## Why Hillary Clinton still can't escape her husband's misdeeds

By Susanna Schrobsdorff

ALMOST EXACTLY 24 YEARS AGO, JUST BEFORE THE New Hampshire primary, Bill and Hillary Clinton sat for an excruciating interview with *60 Minutes*. His presidential campaign had been consumed by lurid tabloid tales of his infidelities. Submitting to a humiliating series of questions about his sex life was a Hail Mary pass. During the episode, Hillary stares intensely at her husband as he admits to marital wrongdoing but denies specific allegations of an affair with Arkansas TV reporter Gennifer Flowers. Then Hillary says something that will haunt her for years: “You know, I’m not sitting here—some little woman standing by my man like Tammy Wynette. I’m sitting here because I love him and I respect him, and I honor what he’s been through and what we’ve been through together.”

Hillary was immediately slammed for differentiating herself from those “little” women who are reflexively loyal to their husbands. But in a cruel twist, years later, as she struggles to prevail in the early primary states, she’s under attack for standing by her man all those years ago. Bill’s 20th century misdeeds are being revisited in the harsh light of 2016’s moral landscape. And now his wife is being accused of being complicit in his behavior, because she did not speak out, believe his accusers or leave him when the sordid details of sexual misconduct surfaced during the impeachment process in late 1998 and early 1999.

**WOMEN NOW RIGHTLY EXPECT** to be taken seriously if they make an allegation of sexual abuse. And Hillary’s opponents have not hesitated to turn that liberal triumph into a conservative cudgel. Donald Trump calls Bill an abuser and Hillary his enabler. The *New York Times*’ editorial board argued that “for decades Mrs. Clinton has helped protect her husband’s political career, and hers, from the taint of his sexual misbehavior, as evidenced by the Clinton team’s attacks on the character of women linked to Mr. Clinton.”

But she was not the only feminist who didn’t abandon Bill when the details of his affair with White House intern Monica Lewinsky were exposed. Many of the feminists who weren’t married to him also remained silent, choosing Bill’s female-friendly policies over individually wronged females. And even now, sympathetic columnists protest, as *New York* magazine’s Rebecca Traister did in early January, that a wife—whether it’s Hillary Clinton or Camille Cosby—should not be held accountable for her husband’s actions.

That’s a powerful argument, but it skirts a more complicated issue. Should Hillary be blamed for dismissing the women accusing her husband? Back in 1998, Hillary identified a “vast right-wing conspiracy” determined to drive Bill from office. It’s impossible to know how much she truly knew

about her husband’s actions—but she certainly knew about their enemies’. So was it a natural reflex for a political wife (or any wife) to believe the best of her spouse and the worst of their opponents, and therefore dismiss the accusations against him, which included not just infidelity but assault and even, in the most fevered precincts, murder?

Today the benefit of the doubt goes to the accuser, not the accused, if not in court then at least in the culture. But does being a feminist now mean siding with the sisterhood, even over your marriage? Does a general commitment to treating accusers with respect automatically include believing a stranger instead of your spouse?

That’s why Hillary has to walk such a perilous line as a candidate. She can’t aggressively defend her husband without looking like she’s bullying his alleged victims, which would alienate her feminist base. Nor can she acknowledge their charges as viable. It’s a double bind. When a woman asked in December how Hillary can say that assault victims should be believed but not address the claims of Juanita Broaddrick, Kathleen Willey or Paula Jones—all women who accused Bill of sexual assault or misconduct—she responded, “I would say that everyone should be believed at first until they are disbelieved based on evidence.” She implied that those cases had been litigated and were no longer an issue.

Perhaps not for Bill, who left office with a 65% approval rating and remains even more popular today. But more young women now view Hillary unfavorably than favorably. And as Michelle Goldberg at *Slate* has written, the ultimate sexist irony may be that while Bill’s behavior didn’t derail his career, it could end up seriously damaging his wife’s. □



**The past conduct** of Bill Clinton (above, in 1992 during the *60 Minutes* shoot, comforting Hillary after a stage light fell nearby) may haunt his wife’s campaign



IN THE ARENA

## President Obama's playground grievances at the State of the Union

By Joe Klein

PRESIDENT OBAMA'S LAST STATE OF THE UNION SPEECH WAS a solid, reasonable affair, even if his delivery was weird. He sounded frustrated, at times almost disdainful. It was, in a strange way, the presidential response to the State of the Union that Republican candidates have been describing for months on the campaign trail, especially Donald Trump. Indeed, South Carolina Governor Nikki Haley's official response was a response to Trump too.

Obama's tone was playground grievance: *Hey, c'mon, guys*, he seemed to be saying, as in, *Hey c'mon, guys*, when he said you're "peddling fiction" if you don't think our economy is the "strongest in the world," with 14 million new jobs and 5% unemployment and deficits reduced by three-quarters. Or, *Hey, c'mon, guys*, our military isn't in decline or being hollowed out, as the Republicans claim; we are "the most powerful nation on earth. Period."

If the purpose of the speech was to reassure a jittery country, I'm not sure he succeeded, even though the achievements he described are real and—despite the GOP disinformation campaign—remarkable. His has been a successful presidency. He's done the most important things: his policies pulled us out of a scary economic ditch, and he managed to keep us safe—as safe as can reasonably be expected—in a world that is careening toward chaos. So why wasn't the speech entirely convincing?

One problem is that it was essentially defensive. Another is that he wasn't entirely honest about the difficulties we're facing. He may be right, for example, that staying out of Syria militarily was the "smarter" course for us to take, but that seemed to imply that being smart was the best we could hope for. It isn't. Syria is an ungodly mess, infecting the rest of the region. The President did say we're facing a generation of chaos in the Middle East, but he might have acknowledged that we haven't figured out a way to ameliorate that chaos. The problem is, there are no easy ways, a fact that doesn't sit well in a Twitter democracy. He might have acknowledged, too, that he underestimated and was slow to respond to ISIS. Still, *Hey, c'mon, guys*, does Ted Cruz really think his carpet-bomb rhetoric is going to straighten things out?

Obama did express a regret, which is a big thing for a President. George W. Bush never did, when it came to Iraq, and Bill Clinton has never copped to being wrong about deregulating Wall Street. But Obama's regret—that the political tone in Washington has gotten worse during his presidency—wasn't a real one. He didn't acknowledge that he had contributed to the problem. Indeed, Haley was far more forthcoming in her response, saying "we" Republicans "have played a role in how and why our government is broken." Her oblique condemnation of Trump was also more direct and impressive than the



### Obama targets Trump:

"There have been those who told us to fear the future, who claimed we could slam the brakes on change, who promised to restore past glory if we just got some group or idea that was threatening America under control."

President's because it came from a Republican. She warned against listening to the "siren call of the angriest voices" or "falsely [equating] noise with results." And for good measure she called the Charleston shooter "a domestic terrorist" and said Republicans "would respect differences in modern families" while respecting "religious liberty." The woman has a future—if the Republican Party's sanity caucus ever regains control.

**OBAMA ENDED** his speech with a call for citizenship. I'm usually a sucker for his perorations, but this one struck me as a bit thin. He seems

to think that instituting the Democratic Party's agenda—more access to voting, curbing campaign spending—will solve the nation's citizenship shortfall.

Obama was surprisingly humble, if only partly accurate, when he said a President with the attributes of Abraham Lincoln or Franklin Roosevelt might have held things together better. For all his gifts, Lincoln didn't hold things together. He and Roosevelt were wartime Presidents, which meant they had to demand service and sacrifices of the American people. Obama has never done that. He has never asked people what they can do for their country. He hasn't proposed a Peace Corps or an AmeriCorps or a Civilian Conservation Corps. His Administration has only grudgingly enforced a work requirement for welfare recipients. It's been a mystifying lapse because, in the end, citizenship in a multifarious democracy has to be an active, aggressive thing. It requires working together, getting to know one another better, demystifying our differences and gaining a far more precise sense of what government can and cannot do. We are steadily losing that sense, which is a boon to those who would exploit our couchbound myopia and passivity. □

WHEN PANIC SPREADS...

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# Made In China: The Next Global Recession

The world has gotten richer, but it's also more interdependent—and likely to suffer **By Rana Foroohar**

**THE CHINESE STOCK MARKET** had been open only 3½ hours on the first trading day of the year when it began to implode. A sharp depreciation in the Chinese currency and bad news from the manufacturing sector prompted a rapid plunge in stocks. The 7% drop was so severe, it triggered so-called circuit breakers—electronic hand brakes of sorts—that stop trading if stocks tumble too quickly. The brakes were supposed to halt panic, but instead they spooked the financial world. London, New York City and other global markets dipped sharply after they opened as nervous traders mulled worrisome cues from the world's second largest economy. Many remembered keenly similar China-bred market turmoil last August.

Markets eventually stabilized after Chinese “national champions,” big state-run firms and funds, went on a Beijing-

directed buying spree. But by Jan. 7, the Chinese markets were crashing again, this time only 12 minutes after opening, triggering more circuit breakers. Authorities tried to get the Shanghai and Shenzhen exchanges up and running just a few minutes later. At 9:59 a.m., two minutes after trading resumed, they were down again. The Chinese currency was in free fall, and normally cautious Chinese policymakers were lurching about for the right moves to stabilize markets. Again worldwide exchanges recorded big opening losses, and global investors struggled to understand what was happening in this usually predictable state-run economy. In the end, the global economy ushered in 2016 with Wall Street's worst five-day start in history, one killer New Year's hangover.

And yet as far as stock-market crashes go, this wasn't a disaster of Lehman

Brothers proportions. After all, Chinese stocks make up a minuscule portion of the global equity markets, and the Chinese have a ring-fenced state-run banking system. This wasn't a too-big-to-fail event; indeed, a number of global markets, including the U.S., rebounded relatively quickly once it was clear that Chinese central bankers and regulators were standing by, as per usual, to buoy markets in one way or another, at least for the time being.

Still, especially if you have had the courage to look at your 401(k) recently, you could be forgiven for asking, What the hell is going on? The world, after all, is seven years into economic expansion. America has been in a steady, if thrill-less, economic recovery since 2009. And the most recent U.S. jobs numbers were great, finally driving unemployment down to normal levels. President Barack Obama wasn't wrong to wax about the resilience of the American economy during his final State of the Union address on Jan. 12. And yet there has been more stock-market volatility over the past few months than in all of the past several years combined.

Here's the hard truth you must accept to understand what's happening in global markets these days: The problems that caused the Great Recession were never really fixed. Debt, which is always the root of financial crises and their resulting recessions, didn't go away—it just found new places to flourish around the world. Back in 2008, the U.S. had a debt bubble driven by a gonzo real estate market that exploded and brought global markets low. Today China has cooked up its own epic debt bubble, which has grown at about three times the rate that the subprime bubble did. (The pace of debt run-up is the best measure of the danger it can cause.) It also has its roots in real estate, not to mention a financial system even more dysfunctional than the one the U.S. has and a political system equally hamstrung by vested interests.

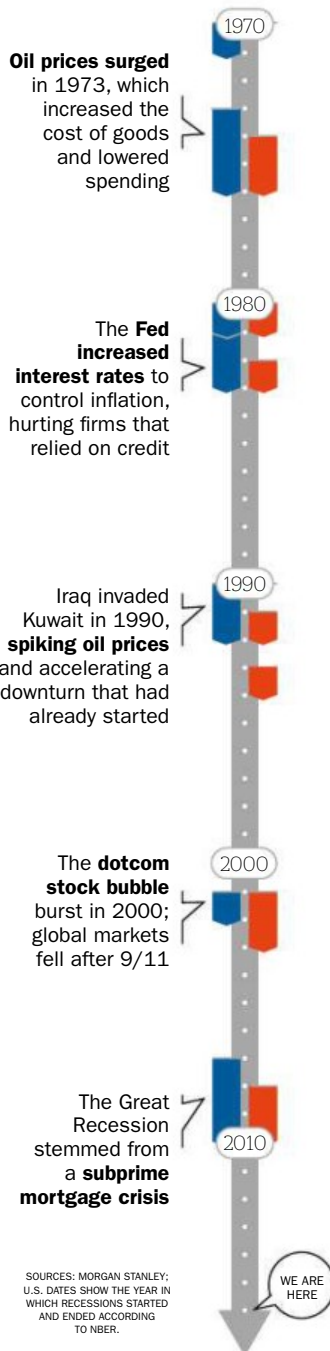
China's debt bubble is now popping. And the country that has made up the largest single chunk of global growth over the past several years is in a major slowdown, one that is for all intents and purposes a recession. That, along with growing worries that China's once lauded economic technocrats may not be able to fix things, has destabilized global mar-

## The world is due for a downturn

Global recessions occur every eight years, on average, when GDP growth drops below 2%

### RECESSIONS SINCE 1970

U.S. WORLD



kets. The result is a metastasizing crisis that doesn't give a fig for international borders or show any signs of slowing.

**THE MEASURE OF NORMALCY** in the global economy over the past few years was guaranteed by a period of unprecedentedly low interest rates. It was also helped along by a \$29 trillion infusion of public cash into private markets in practically every nation, engineered by the world's governments and central banks. The U.S. Federal Reserve, first and foremost, propped up growth following the financial crisis.

But the Fed's money dump, known as quantitative easing, ended more than a year ago. That's when markets got jittery. In December, Fed chair Janet Yellen and other central-bank governors drew another line in the sand with the first U.S. interest-rate hike since 2006. Market volatility has been elevated since then.

When rates rise, it's supposed to mean the economy is getting stronger, which in the U.S. it has been, at least in terms of job creation. But as too many Americans know too well, there is little or no real wage growth, which is very unusual at this point in an expansion. That is especially problematic in an economy like the U.S.'s, 70% of which is consumer spending. There are more jobs, but not the kind that put more money in people's pockets or make it possible for consumers to drive demand in the global economy. We have a "recovery," but in many ways it is a genetically modified recovery, not created by real growth on Main Street.

Thanks to four decades of globalization, the U.S. doesn't carry as much weight in the world economy as it used to. During the Asian financial crisis of the late 1990s, for example, U.S. growth powered ahead despite troubles in much of the rest of the world. But the Chinese economy has grown wildly since then. China made up about a third of all global growth over the past decade, even more than the U.S., which made up only 17%. "This represents a major break from the past," says Morgan Stanley Investment Management chief macroeconomist Ruchir Sharma. "Historically, the U.S. has been the single largest contributor to global growth, and a contraction in the American economy has been the catalyst that tipped the world into recession."

Now the next global recession is likely to be made in China. The Middle Kingdom and other emerging markets (many of which rise and fall on Chinese economic news) make up 40% of the entire global economy, so what happens there matters more than ever. While questionable Chinese government statistics still claim that the country is growing at 7% a year, Sharma puts that figure closer to 4%. Other longtime China observers say it's even lower. In China, that level of growth feels like a recession—a fear that President Xi Jinping acknowledged at November's APEC meeting, when he pledged that China was “working vigorously to overcome difficulties and meet challenges by strengthening macro regulation and effectively advancing reforms.”

Indeed, most of the world's top economic forecasters have begun to wonder if 2016 will bring a full-blown global recession. Already, most of those forecasters are predicting serious market turbulence in the weeks and months ahead. “Historically, global recessions happen every eight years, and we're in the seventh year of an expansion,” notes Sharma, “so based on past data, it's quite likely.”

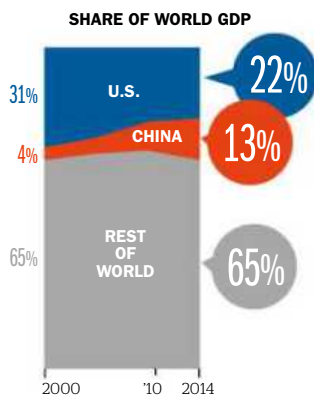
When American consumers stopped buying stuff after the 2008 subprime crisis, China tried to take up the slack in the form of a massive government stimulus program. This meant a major run-up in its debt: a few years back, it took a dollar of debt to create every dollar of growth in China. Following 2009, it has taken four times that. And even today, debt in China is still rising about twice as fast as growth. Why is that a problem? Because financial crises are caused by fast run-ups in debt—and aside from wars and high inflation, financial crises are mainly what slow down the global economy. In this context, China's unprecedentedly fast debt run-up is particularly worrisome.

**A COUPLE OF YEARS AGO**, the China bubble started to burst. The Chinese government tried to stop it by propping up one market after another, from housing to stocks. Last July, the government spent more than \$400 billion to shore up overpriced stock markets before giving in to gravity and letting the markets fall.

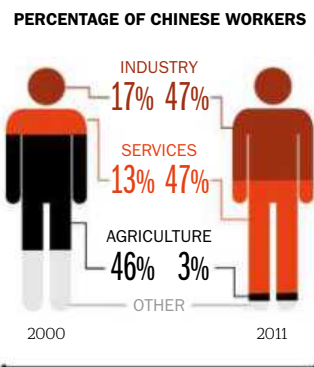
Many global markets rebounded after the Chinese authorities made it clear that big state-run companies would continue

## China holds great economic sway

China, a developing country, became the second largest economy in 2009. Today, its GDP tops \$10 trillion



China's economy boomed thanks to rising goods and services sectors that helped establish a middle class



China says its economy is growing at 7% annually—but many economists believe the number is far lower



to buy up Chinese blue-chip stocks to support the country's main bourse, the Shanghai market. Beijing also said that bans on big institutional-investor stock sales, which had been set to expire, would continue. The markets simply needed this institutional underpinning; as the past few weeks have made clear, investors are all too willing to cash out of Chinese investments and put their money someplace with more political and economic certainty the minute they can. But China is now in a catch-22 situation, since the very fact that authorities have to take such actions means they aren't in control of the markets, and that further erodes investor confidence.

In a way, this is partly good news—China has to cede more state control to the market system while bringing growth to a more sustainable level in order to move up the economic food chain. But the unpredictability of policy decisions around that is cause for concern, says Mohamed El-Erian, chief investment adviser for financial-services company Allianz. “The Chinese are in new territory, adapting to a more free-market situation that they know less well. They learn quickly, but there will be a learning curve,” he says.

That learning curve has already proved costly. Nearly a trillion dollars of capital have left China since 2014 as many investors try to get their money out of the country. That has forced the government to open up its \$3.3 trillion war chest of foreign-currency reserves to prop up the renminbi, which is trading at much lower levels in Hong Kong than on the mainland—an indicator that investors think the Chinese markets and economy have further to fall.

That might sound like a lot of money, but reserves were around \$4 trillion at the beginning of last year, a marker of how fast they are being run down, and experts like Sharma say that only around two-thirds of those reserves are liquid, or easily accessible in a pinch. “So, how big is that war chest, really?” he asks. “For years, we've had this idea that the Chinese are these very competent technocrats and that they have plenty of money to cover all the debt they've built up. But today we estimate that about half of the new loans being doled out in China are going to pay interest on the existing debt load.”

The current volatility in the markets, which will likely continue through 2016, reflects worries about whether authorities will be able to move smoothly from a state-run economy to a consumption-led one. It's a shift that only three countries in Asia have ever made—Japan, South Korea and Singapore—and none of them had anywhere near the population of China, nor the opacity of decisionmaking that is characteristic of China's Communist Party leadership. All this, combined with the back-and-forth policy moves, has resulted in “a low level of trust in what the market hears” from Beijing, as a recent Deutsche Bank analysis concluded.

**MEANWHILE, THERE ARE** new worries about the U.S. Its export sector has been struggling for some time, in part because a strong dollar has made U.S. goods more expensive in the global marketplace. That's a big problem, because net exports have contributed twice as much to this recovery as to recoveries of the past.

The Fed is raising rates and the dollar is rising, but the rest of the world is still moving in the opposite direction, creating a “Great Divergence” in monetary policy. That will take the global economy into new territory and likely contribute to more market turbulence as investors struggle to figure out where to place their bets in a world where asset prices and classes no longer move in sync.

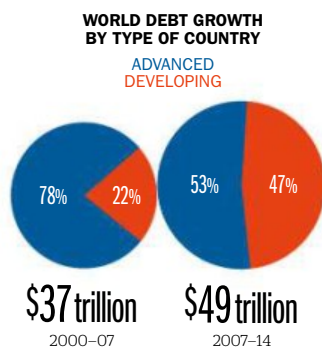
Although U.S. consumers are no longer a source of instability, neither are they a source of growth. Americans have off-loaded plenty of personal debt in the wake of the crisis and cleaned up their household balance sheets. But unlike in recoveries past, spending hasn't picked up, despite the rise in stock and housing wealth over the past few years. That's very unusual—over the past 30 years, as soon as the prices of assets like stocks and homes began to rise, people typically felt more secure, reducing their savings and spending again.

Since the Great Recession, something else has changed. U.S. net wealth has increased by \$20 trillion since 2012, thanks to gains in both stock markets and housing. But the personal-savings rate, which now hovers around 5%, is about twice what it should be given such gains, according to research by JPMorgan.

The root cause, say economists, could

## China's debt is unsustainable

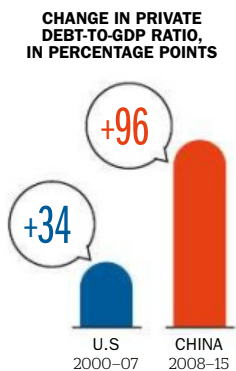
Developing nations now account for much of the world's new debt. Debt run-ups can signal a looming crisis



China has surpassed all previous emerging-market debt binges, such as those below:



China's debt is growing nearly three times faster than U.S. debt grew before the 2007 financial crisis



SOURCES: MCKINSEY GLOBAL INSTITUTE; MORGAN STANLEY

be in part our collective age—people spend less as they get older. But it may also be the fact that most of that stock and housing wealth is accruing within a small subset of the population—the top 10% of the population owns nearly 90% of all stocks—even as real wage levels remain virtually flat. That means that only the wealthy feel more economically secure, and there are only so many cars, homes and designer trinkets they can buy.

This has been a drag on the U.S. recovery, and it may be a permanent one. History shows that when consumers go through a seismic economic event, it changes their behavior over the long term. Think about Depression-era grandparents who save tea bags, or boomers who fueled the economy with their postwar spending. It could be that the financial crisis of 2008 and the recovery that followed, which has been the longest, slowest one on record, has bred a new type of American consumer, one less willing (not to mention able) to consume. In any case, aging demographics in developed countries like the U.S., European states and Japan don't bode well for growth, which is essentially a function of working-age population and productivity combined.

So where does that leave us? Struggling to find a safe way forward in a new world, one that developed countries helped create. Globalization, fueled by Western neoliberal economics and the American economic miracle of the past century, has ushered in a more diverse and far richer global market. Free markets—if sometimes inefficient and periodically prone to crisis—won over competing models. But as a result, America must share center stage and can no longer pull the world forward alone.

The global “rebalancing” that many economists and policymakers had hoped for following 2008—a shift in which the world could depend more on China and other emerging markets, and less on U.S. consumption—hasn't really come to pass. We still live in a global economy that is driven by debt rather than productive investment. Low wages impede productivity gains. Inequality is a further drag on growth. And emerging markets can't yet offset the long-term slowing of developed nations. In economics, as in geopolitics, it's now a world in which there is no single superpower. □

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CAMPAIGN ★ 2016

# THE GOSPEL OF TED

Why Cruz has a chance to win the Republican nomination

BY ALEX ALTMAN/CISCO, TEXAS

**THE FAITHFUL GATHERED** four days before New Year's at a remote ranch on the frigid Texas prairie. Farris Wilks, a rural pastor and fracking billionaire, had summoned 300 of the nation's most influential Christian leaders to his opulent mansion outside the two-stoplight town of Cisco for a private audience with GOP firebrand Ted Cruz. The crowd packed the house and spilled onto the patio, huddling near space heaters to ward off the chill. Cruz and his wife Heidi held court for hours, taking questions on everything from regulatory issues to foreign affairs. Prayer lasted nearly 90 minutes. "It was part of the introduction process," says David Barton, an evangelical leader who runs Keep the Promise, a network of pro-Cruz super PACs. "That's what it takes."

It's in meetings like this, at the nexus of great wealth and deep devotion, that Cruz is forging a coalition that could make him the Republican presidential nominee. The Texas Senator's prospects hinge on two big bets. First, that he can broaden his following beyond the Tea Party by courting social conservatives. And second, that he can prove to evangelical leaders that a populist insurgent can muster the money and organization to compete in a grinding primary battle. Most of his rivals have shuffled tactics like lottery tickets, but Cruz has charted a course and stuck to it.

His bets are paying off. Cruz leads in polls of voter preferences ahead of the Feb. 1 Iowa caucuses. A victory in Iowa, his thinking goes, could vault him into the South Carolina primary later that month, and beyond that boost his chances in the delegate-rich Southern primaries on Super Tuesday, March 1. Buoyed by billionaires like Wilks, Cruz hopes to consolidate the support of the GOP's conservative



*Cruz prays with Iowans Dick and Betty Odgaard, left, at a rally for religious liberty in Des Moines in August*



wing. The Cruz campaign and allied super PACs have raised more cash—more than \$65 million—than any Republican except Jeb Bush. And he has won endorsements from scores of top Christian leaders in key states around the country. “The coalition he’s building is going to be very, very difficult to defeat,” says Iowa evangelical kingmaker Bob Vander Plaats, who endorsed Cruz in December.

Party leaders, though allergic to Cruz, acknowledge that he has a real shot to stop Donald Trump and carry the GOP flag into a general-election battle against Hillary Clinton. If so, the path that ran through the Wilks ranch began at Liberty University, and he’s been singing the same hymns ever since.

**CRUZ LAUNCHED HIS CAMPAIGN** in March at the Lynchburg, Va., evangelical institution founded by the late Rev. Jerry Falwell. His speech that day blurred the boundary between stump and sermon, and his pilgrimage to the world’s largest Christian university was part of his plan to leverage the power of the pews in Iowa, where 57% of GOP caucusgoers identified as evangelical in 2012.

But rolling up the religious right is easier said than done. Consensus is the Higgs boson particle of the social-conservative universe, a phenomenon perpetually pursued but extremely elusive. In 2008, a cadre of influential pastors and businessmen screened Republican candidates at private gatherings but failed to settle on a favorite, paving the way for John McCain to win the nomination with scant support from their ranks. Four years later, something similar happened, as national Christian leaders couldn’t coalesce behind an alternative to Mitt Romney. For Cruz, this record was a kind of blessing. “There was a determination among many of us not to let that happen again,” says Ken Cuccinelli, former attorney general of Virginia, who endorsed Cruz in December.

And so the Texan lobbied top Christians during private dinners and public forums. After the Supreme Court legalized same-sex marriage nationwide last summer, Cruz told Iowa voters that “2016 is going to be a religious-liberty election.” He cut a video tribute to Dick and Betty Odgaard, Iowa Mennonites who lost their wedding business after refusing to perform a same-sex wedding in their chapel.

## CRUZ FILE

**BIRTHPLACE:** Calgary, Alberta

**WIFE:** Heidi Nelson Cruz, a managing director at Goldman Sachs in Houston (on leave)

**PAST JOBS:** Solicitor general of Texas, George W. Bush campaign adviser, Supreme Court clerk

**HOBBIES:** *Candy Crush* addict; former collegiate debate champ

**FAVORITE MOVIE:**  
*The Princess Bride*

**YEARS IN ELECTED OFFICE:** 3

**CAMPAIGN SLOGAN:**  
“Reigniting the promise of America”

Cruz tapped social conservatives for key campaign posts. The candidate’s father Rafael, himself an ordained minister, spent months crisscrossing early voting states, sharing the gospel of Ted with pastors and Tea Party activists. This “tireless work in reaching out to people and elevating some of these issues has caused a certain momentum that will feed on itself,” says Gary Bauer, a prominent social conservative and onetime White House hopeful himself.

For months, prominent evangelical leaders held private meetings to weigh their options. Determined to back a viable candidate, they pored over fundraising reports like Scripture. “The most Christian candidate might be someone that can’t raise \$10 million for an entire campaign,” says a well-connected social conservative with knowledge of those gatherings. “That person’s not going to be President, no matter how Christian they are.” In December, the group held a straw poll at a hotel in Northern Virginia. In the final ballot, more than three-quarters voted to support Cruz over Florida Senator Marco Rubio. The pastors have been rolling out their endorsements at intervals ever since to win media coverage and avoid any appearance of theocracy.

Which brings us to Wilks, a former bricklayer who grew up in a converted goat shed. Wilks and his brother Dan built a fracking-services business that they cashed in for \$3.5 billion near the

height of the shale boom in 2011, and they’re using part of the proceeds to play patron and matchmaker for Cruz. Farris Wilks remains pastor of the Assembly of Yahweh 7th Day church near Cisco, which teaches a fundamentalist blend of the Old and New Testaments. He and his brother control nonprofit foundations that pour millions into social-conservative causes such as stopping abortion and same-sex marriage. Along with their wives, they have contributed \$15 million to Keep the Promise. Those checks have made the little-known family the largest donors to any 2016 candidate. Wilks sees Cruz as “a committed conservative with a strong faith,” he told TIME through a spokesperson. “He’s not afraid to stand against members of his own party and say things that need to be said.”

Keep the Promise is organized as a quartet of interlocking groups, a structure designed to offer big donors more control over spending. Since September, it has been led by Barton, a historian popular on the right for his argument that America’s founders never intended to take faith out of the public square. In addition to the Wilkses, New York financier Robert Mercer funneled \$11 million into his own pro-Cruz committee, while Texas energy investor Toby Neugebauer seeded another group with \$10 million. Each group has a separate focus. The Wilks outfit is devoted to digital advertising on platforms like Facebook, while the Mercer group funds TV and radio ads, direct mail and data analysis.

The campaign uses data supplied by a Mercer-connected analytics firm to steer its decisions on everything from voter targeting to personnel to scheduling. Data “guides everything we do,” a senior campaign adviser told TIME in an interview last year. “It guides where to buy ads. It guides where we go.” And, more than anyone else, Cruz is searching for votes in the South. When rivals flocked to candidate cattle calls in Iowa and New Hampshire, he often took a longer view, traveling to states like Louisiana and North Carolina that vote in later waves of balloting to speak to county-level groups or court obscure party functionaries.

The strategy is dictated by a twist in this year’s election calendar. To ease a bruising primary process, party bosses compressed the voting this time around.



The changes vest more power in the Republican Party's strongest bastions, so that deeply conservative states choose their delegates in the pivotal first weeks of March. On Super Tuesday alone, roughly one-fourth of all pledged delegates will be up for grabs, including key contests in Alabama, Arkansas, Georgia, Tennessee and Texas, where Cruz's message is tailored to the GOP voter.

**OF ALL THE CANDIDATES**, Cruz has taken a singular approach to the Trump conundrum. Rather than brawl with a schoolyard bully, Cruz has cozied up to the bombastic front runner, in hopes that he will win over Trump's supporters if the billionaire stumbles. A recent NBC/SurveyMonkey poll appeared to ratify the strategy: 39% of Trump supporters said Cruz was their second choice, nearly three times the figure for any rival. But the détente is fraying. Since Cruz opened a lead in Iowa, Trump has trained his guns on the Texan, questioning Cruz's faith, his temperament, his opposition to ethanol subsidies and even his citizenship. (Cruz was born in Canada to an American mother; many legal experts say this satisfies the constitutional requirement that the President be a natural-born citizen.)

For his part, Cruz tried to tiptoe around Trump. On a six-day, 28-county Iowa bus tour that ended Jan. 9, he did appearances in diners and Christian bookstores while Trump held megarallies.

^  
*Cruz rallies the faithful at a  
pizza parlor in Spirit Lake,  
Iowa, on Jan. 6*

## CRUZ'S CAMPAIGN PROPOSALS

On most issues, the freshman Senator has positioned himself as the most conservative member of the Republican primary field

### FOREIGN POLICY

Cruz says he would "carpet bomb" ISIS and would consider sending new U.S. ground troops to the Middle East

### SOCIAL ISSUES

Opposes same-sex marriage and argues that states should ignore the Supreme Court ruling that legalized it nationwide

### ETHANOL

Wants to phase out the Renewable Fuel Standard, a mandate that many conservatives abhor but farmers in states like Iowa rely on

### IMMIGRATION

Has long opposed a path to citizenship for undocumented immigrants and now says he would deny them the chance to earn legal status as well

### TAXES

Proposes abolishing the Internal Revenue Service and creating a flat tax of 10% on personal income and 16% for corporations

"The Iowa way," he flattered the crowds who braved subzero windchills in tiny hamlets. And while the campaign has little appetite for a one-on-one tussle, Trump's provocations have forced Cruz to fight back by tweaking Trump's "New York values" and his old ties to Clinton.

Other challenges loom. Staking out the most conservative position on almost every issue has benefits in a primary, but Cruz's hard line leaves many Republicans unconvinced that he could attract moderate voters come autumn. Putting the Texan atop the ticket would "utterly destroy" the party's chances in November, GOP strategist Josh Holmes told Politico. "We'd be hard-pressed to elect a Republican dogcatcher north of the Mason-Dixon or west of the Mississippi."

And even a textbook campaign is only as good as its candidate. A former Supreme Court litigator, Cruz is a polished orator and a canny tactician with a feel for the fears of the base. But as a retail performer, he strikes some discordant notes. During one recent 48-hour stretch in Iowa, he talked about spanking his 5-year-old daughter and told an undocumented immigrant brought to the U.S. as a child that he would deport her if elected. In a race that has turned far more on personality than policy, he's the candidate who can be hard to like. "If you want someone to grab a beer with, I may not be that guy," he conceded during an October debate. "But if you want someone to drive you home, I will get the job done."

Not exactly charismatic. But maybe that's the point. The rise of Trump is proof enough that at the close of the Obama era, what conservatives crave is not charm but combat, someone with the toughness—maybe even the mean streak—to tame a scary world. This is an election short on gauzy slogans and long on gravity. And Cruz does tribal rhetoric better than most.

Certainly the faithful are rallying to it. The night after the pastors' conclave, a standing-room crowd crammed into the Cisco community center built by the Wilkses, greeting Cruz's stump speech with staccato applause. The Wilks brothers are all in for Cruz because "they are very concerned about the future of the country," explains Barton. "They think Ted is willing to fight." For now, he has plenty of ammunition. □

# The Diet Prescription

*A deceptively simple approach to Type 2 diabetes is showing promise*

*By Mandy Oaklander/Chicago*

**DR. MONICA PEEK** had been telling her patients for years that food can be medicine, but it wasn't until she started scribing down actual prescriptions on paper—"I recommend the following nutrition for this patient"—that they started taking her seriously.

Over time, her advice gained enough traction that those diet prescriptions are now at the heart of a novel study supported by the National Institutes of Health (NIH) that's challenging the status quo of Type 2 diabetes prevention and treatment.

Peek is a primary-care physician and lead researcher of the South Side Diabetes Project in Chicago. That's why, at 10 o'clock on a Saturday morning, she's here, munching on a banana, as 15 people are being guided around a grocery store, being taught which foods are diabetes-friendly and which are best left on the shelf. Led by a nutritionist, the group stops in front of a cold case full of nondairy milk. "I guarantee if you give the body what it wants, it's going to do what it's supposed to do," says Bridgette Adams, the nutritionist leading the tour. "And you will get better. You will get better. You will get better."

When it comes to preventing Type 2 diabetes, that mantra may be more than wishful thinking—which is good news, because the stakes are high. One out of three Americans

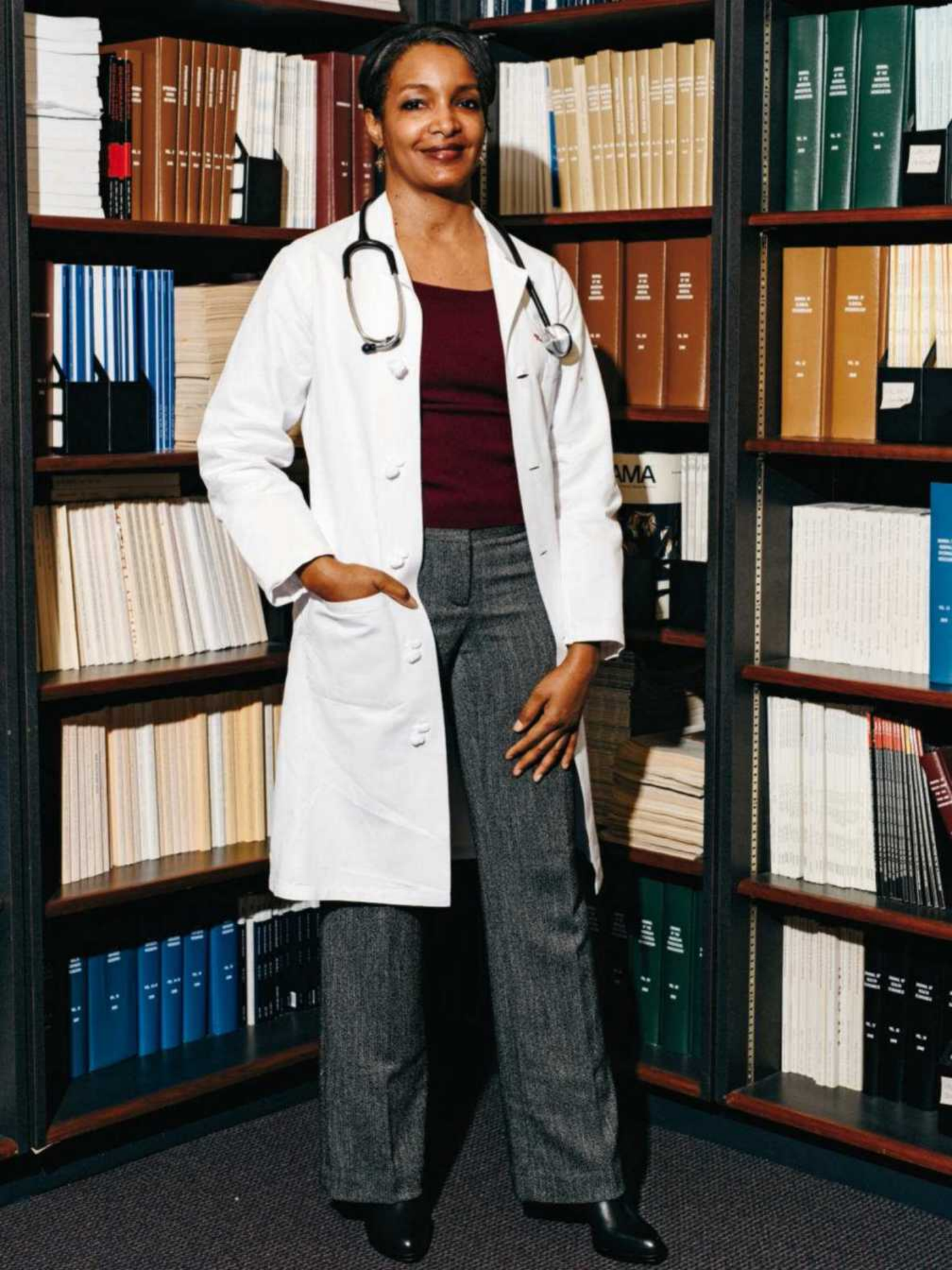
will be diagnosed with diabetes by 2050, according to the Centers for Disease Control and Prevention (CDC), and 29 million people already have the disease.

People with Type 2 diabetes, who are often overweight, can experience extreme fatigue, blurry vision and sores. Though some people don't feel symptoms right away, the slow-growing but potentially debilitating disease can gradually damage their blood vessels and nerves. And even when it's well managed, it requires constant vigilance: monitoring blood-sugar levels, counting carbohydrates, timing meals, taking multiple blood-sugar-lowering drugs and sometimes injecting one's abdomen with a syringe full of insulin.

In 2012, diabetes cases—90% of which were Type 2—cost the U.S. health care industry about \$245 billion. And some of the larger price tags are for its complications. Left to progress, Type 2 diabetes can lead to blindness, kidney failure and nerve damage that can require foot or leg amputations. Taken together, that has led researchers and doctors to look for better ways to reduce the number of people who develop the disease every year.

Programs like Peek's may be onto something. For the better part of the past two decades, new cases of Type 2 diabetes shot up considerably each year, but that trend

*Dr. Monica Peek leads a lifestyle-based program about Type 2 diabetes called Improving Diabetes Care and Outcomes on the South Side of Chicago*



appears to be leveling off, according to a December 2015 CDC report. Meanwhile, data emerging from years-long studies indicate that exercise and changes in diet can dramatically reduce a person's risk of developing Type 2 diabetes.

"I think people intellectually know that eating healthy and being active is good for you, but I don't think they understand what an impact it has on preventing Type 2 diabetes for those at high risk," says Ann Albright, director of the Division of Diabetes Translation at the CDC. "It really is the most effective intervention for delaying or preventing Type 2." What researchers like Peek are trying to figure out is how to spread that message in a way that works in the real world.

In the U.S., more than two-thirds of adults are overweight or obese. Since extra body fat is a major risk factor for Type 2 diabetes, that means a lot of people are at risk of getting the disease. Still, some populations are at higher risk than others. Black Americans, Hispanics and American Indians, for instance, have higher rates of the disease than whites. The South Side Diabetes Project focuses on Chicago's best-known black neighborhood.

The program hosts cook-offs and offers diabetes-education classes as well as farmers'-market and grocery-store tours. All this is done in addition to a patient's standard treatment, which may include several kinds of medication administered by a physician at one of six medical clinics—two of which are run out of the nearby University of Chicago, where Peek is an associate professor of medicine.

This type of program, while not altogether new, is now winning the support of insurers, many of which are beginning to reimburse patients and organizations for lifestyle-based prevention programs. "We can prevent a lot of chronic diseases if we eat better and exercise more," Peek says. "But people don't always think about it in that way."

**THIS ISN'T THE FIRST TIME** researchers have experimented with lifestyle as a way to prevent Type 2 diabetes. In 2002, the Diabetes Prevention Program, a landmark NIH trial that lasted for three years, published its findings in the *New England Journal of Medicine*.



At 27 sites across the country, researchers divided 3,000 overweight people with prediabetes—an elevated blood-sugar condition that, without intervention, typically progresses to full-blown Type 2 diabetes—into groups. Members of the lifestyle-intervention group ate less fat and fewer calories, exercised for about 20 minutes a day and aimed to lose about 7% of their body weight. Another group took metformin, a commonly prescribed glucose-lowering drug that's taken by millions of Americans. The third group took a placebo.

The people in the diet-and-exercise group reduced their risk of developing diabetes by 58%. Lifestyle changes were especially impressive for older people; those 60 and older reduced their risk of diabetes by 71%. People who took metformin also saw a benefit, but they slashed their diabetes risk by only 31%—about half that of the lifestyle group. "Those results really brought the issue to light that diabetes development is not inevitable,"

▲  
*The South Side Diabetes Project teaches shoppers how to count carbohydrates*

#### HOW TO SHOP SMART

##### CEREAL

100% whole grain is best—but if you won't give up your favorite cereal, mix it with a more fibrous option, like bran

##### BROCCOLI

Cruciferous vegetables are linked to lower levels of inflammation—good for diabetics, who are at higher risk for joint disorders

##### YOGURT

Choose Greek, which has less sugar and more protein than most sweetened kinds



says Dr. David Nathan, chairman of the Diabetes Prevention Program and director of the Diabetes Center at Massachusetts General Hospital.

In another study, a randomized trial out of the Goldring Center for Culinary Medicine at Tulane University, a small number of people with Type 2 diabetes were divided into two groups. One of the groups was taught how to prepare foods consistent with the diabetes-friendly Mediterranean diet; the other group was given basic nutrition instruction. After six months of follow-up, the researchers saw significant improvements in the cholesterol and blood-pressure levels of the Mediterranean-diet group—and the changes lasted.

“It’s not just a quick blip in their health records,” says Dominique Monlezun, director of research and development for the Goldring Center. “These patients are actually changing their eating behaviors in a way that we see as sustainable.”

Nathan, who ran the pioneering Dia-

betes Prevention Program study, also saw lasting change. He and his colleagues followed their original groups for about 15 years. In the follow-up, published in November 2015 in the *Lancet Diabetes & Endocrinology*, 27% fewer of the people who made lifestyle changes ended up developing Type 2 diabetes, compared with the control group.

Backed by substantial evidence that lifestyle changes work in preventing the development of Type 2 diabetes—especially in those who are at high risk of the disease—the approach began to take hold. The CDC now recognizes more than 800 organizations across the U.S. that offer programs in that vein. One of the most successful is the YMCA’s Diabetes Prevention Program, a one-year curriculum designed to help overweight adults with prediabetes prevent the onset of Type 2 diabetes. (About 86 million American adults are estimated to have prediabetes, though only about 10% of them know it.) In weekly classes, across all 43 states where the Y program is offered, people are coached on healthy ways to modify lifestyle. Those who finish the class lose an average of 5.4% of their body weight by the end of the year.

And while no one is suggesting that diet and exercise alone can reverse Type 2 diabetes, similar strategies can reduce the severity of the symptoms. A study of 5,000 people with Type 2 diabetes showed that the same diet-and-lifestyle intervention used in the Diabetes Prevention Program improved their diabetes, blood pressure and cholesterol control, all while allowing people to use fewer medications than the control group.

**FOR ALL THE DATA** supporting diet as a way to prevent Type 2 diabetes, a doctor’s telling his or her patient to eat right and exercise more isn’t going to cut it. “I think a lot of doctors, to their credit, they probably tell you, You need to lose weight,” says David Marrero, director of the Diabetes Translational Research Center at Indiana University. “But they don’t give you specific recommendations, because they’re not trained in behavioral modification.”

Indeed, a major downside to the diet-and-exercise strategy is that it requires

a lot of work over a long period of time. “You can dabble around and halfheartedly do things,” says the CDC’s Albright, “but for preventing Type 2 diabetes you do really need to make sure people get an adequate dose of the intervention.”

That means a consistently good diet and regular exercise—as well as addressing the barriers that make it challenging for people to stick to those healthy behaviors. Still, it can be an uphill battle. “Even though we know you can do modest changes in your lifestyle to reduce risk,” says Marrero, “it is difficult for many people for a wide variety of reasons. Some are genetic, some are psychological, some are social, some are economic.”

In addition to nutrition tours and cooking classes, Peek and her team distribute those doctor-signed prescriptions, with vouchers for farmers’ markets or for the food section of a Walgreens or for free fitness classes at nearby parks. So far, the results from Peek’s program are promising. A study last August found that the diabetes-education classes—central to Peek’s program—were advancing not only patient knowledge about the disease but also their attitudes about taking charge of their health. Working with the people on the other side of the health care equation—doctors and other clinic staff—is a critical part of the puzzle too. Leaders at the South Side Diabetes Project train the physicians and their teams at their six partner clinics on how to deliver care to patients of different cultures.

That’s why, at the end of the South Side grocery tour, everyone gets a hug and a gift card for food. A woman who took the tour checks out with a box of lettuce—but also some candy and chocolate. “This whole thing is complicated,” says Peek. “If it was easy, we would have solved it years ago.”

Although the diabetes epidemic may be slowing ever so slightly, it’s nowhere near over, and much remains to be seen about the best way forward. But Peek is stubbornly supportive of every person taking the first step—even if it’s just a few leaves of lettuce.

“We sometimes forget the importance of what motivates people, and it’s relationships,” Peek says. “You just have to care about people, and that’s something anyone can do.” □

— | APPRECIATION | —

# DAVID BOWIE

— |

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By ISAAC GUZMÁN

PHOTOGRAPH BY SNOWDON





*Bowie in the  
foliage of Lord  
Snowdon's house  
in London in 1978*

## So I turned myself to face me

But I've never caught a glimpse  
Of how the others perceive the faker  
I'm much too fast to take that test  
—“Changes,” 1972

OH, YOU PRETTY THINGS! HOW YOU LOVED DAVID Bowie—imagined yourselves in his guise, stood before your bedroom mirrors and preened in mascara, boas and platform shoes. How you turned up the music, then stepped back, striking a chord on your air guitars before singing along, in unison: “Ziggy played gui-ta-aa-ar!”

Bowie was the rare artist who inspired not just adulation but imitation, a desire to inhabit and inhale the glittering spectacle he presented on album covers, in music videos and onstage. His five-decade career was an ongoing act of transformation, a series of outrageous experiments in personae and power chords. From Major Tom's lonely “Space Oddity” rocket ride in 1969 to the disquieting “Lazarus,” his last single and video, Bowie was always seeking his next great role. In illness and death—which came from liver cancer on Jan. 10, just two days after his 69th birthday and the release of *Blackstar*, his 25th studio album—he found inspiration for his final lines, which he read as passionately and cunningly as anything in his repertoire. “Look up here, I'm in heaven,” he sang. “I've got scars that can't be seen.”

Long before Madonna became the queen of reinvention, Bowie mastered this subtlest of art forms. A man of avid and sometimes fleeting fixations, he moved from inspiration to inspiration, wringing all he could from each incarnation. While his friend and hero Lou Reed followed a singular inner voice, Bowie synthesized his creative force into a string of characters and catchphrases—“Queen Bitch,” “Rebel Rebel,” Ch-ch-ch-“Changes,” “Rock 'n' Roll Suicide”—that altered the course of pop music, infusing it with highbrow ideas about art, identity and theater, as well as a succession of shimmering jump-suits that would one day be hung in great museums. If Bowie revealed his true self, it was obliquely; he toyed with our perception of him, reflecting back at us our hunger to stand out, to be something special.

“I always had a repulsive need to be something more than human,” he once said of his creations. “I felt very puny as a human. I thought, ‘F-ck that. I want to be superhuman.’”

**IT'S IMPOSSIBLE TO PINPOINT** the moment when the man born David Robert Jones became David Bowie. One might say it was in 1966, when the leader of the failed R&B group Davy Jones and the Lower



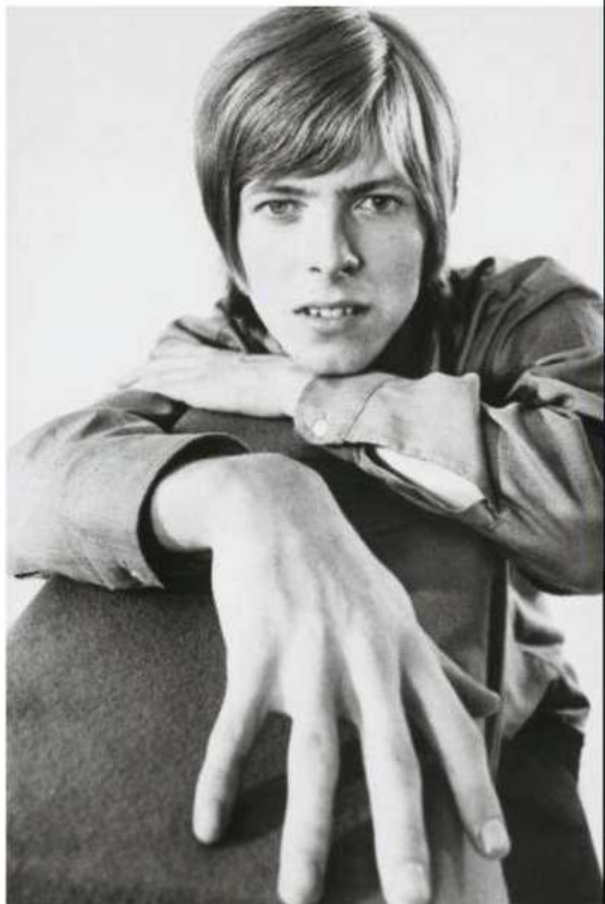
**‘He was a fearsome talent, and the loss to music and culture from his passing is inestimable. In and out of our lives, always challenging and innovative ... I had no idea he was close to death. What a life.’**

BRIAN MAY,  
guitarist for Queen,  
co-writer of “Under  
Pressure”



**‘David Bowie changed the course of my life forever. I never felt like I fit in growing up in Michigan. Like an oddball or a freak. I went to see him in concert at Cobo Arena in Detroit. It was the first concert I'd ever been to ... his music was always inspiring, but seeing him live set me off on a journey that, for me, I hope will never end.’**

MADONNA





**'David was always an inspiration to me and a true original. He was wonderfully shameless in his work. We had so many good times together ... He was my friend. I will never forget him.'**

MICK JAGGER, who sang "Dancing in the Street" with Bowie



**'David Bowie was one of my most important inspirations, so fearless, so creative. He gave us magic for a lifetime.'**

KANYE WEST

**'He always did what he wanted to do. And he wanted to do it his way and he wanted to do it the best way. His death was no different from his life—a work of art. He made Blackstar for us, his parting gift. I knew for a year this was the way it would be. I wasn't, however, prepared for it. He was an extraordinary man, full of love and life. He will always be with us. For now, it is appropriate to cry.'**

TONY VISCONTI, producer of 11 Bowie albums

Third learned that another Davy Jones had signed on to be the heartthrob of a made-for-TV band called the Monkees. His first wife Angela might tell of the night in 1970 when she persuaded his new band, the Hype, to wear the brightly colored costumes she had made. Or in 1971, when he traveled to New York City and met Andy Warhol, Iggy Pop and Reed. Combine all that with fretful reading of the German philosopher Friedrich Nietzsche, a few years studying mime with Lindsay Kemp, a friendship with T.Rex singer and glam-rock pioneer Marc Bolan, and repeated viewings of Stanley Kubrick's *A Clockwork Orange*—the recipe for rock's most audacious creature came together just as Bowie flowered as a songwriter.

Bowie was uniquely equipped to embody Ziggy Stardust: cheekbones like Catherine Deneuve's, a ballerina's lithe frame, eyes that appeared to be two different colors thanks to a permanently dilated pupil caused by a punch he absorbed at 15, fighting his best friend over a girl. To these uncanny features he added a shock of spiky, carrot-colored hair, a skin-tight unitard and high-heeled boots. He was a sexy beast who appealed to both men and women, at once dangerous, groundbreaking and iconic.

With guitarist Mick Ronson and producer Tony Visconti, Bowie married his looks to lyrics and music that became anthems for his characters. Ziggy Stardust spoke for a mysterious Starman and announced that young people everywhere were going through changes and everybody else needed to "turn and face the strange." Aladdin Sane celebrated the rebellious "hot tramp" who tore her (his?) dress and let her mascara run. The fascistic Thin White Duke, an elegant, coked-out and skeletal apparition, crooned menacingly about "Fame" with John Lennon but sounded eminently earnest when celebrating the gusto of carefree "Young Americans."


If ever the act outgrew the man it was when Bowie unveiled his shiniest invention: the pop singer who released 1983's *Let's Dance*, an unexpected turn from the avant-garde experiments that comprised his "Berlin trilogy" at the end of the '70s and *Scary Monsters (and Super Creeps)* in 1980. Under the influence of producer Brian Eno, those albums produced hits such as "Heroes," "Ashes to Ashes" and "Fashion," but they appeared alongside daring, dark sounds bristling with the newfound energy of punk and new wave. When the title track to *Let's Dance* hit American airwaves in early 1983, it created a sensation, dislodging Michael Jackson's "Beat It" from the top of the charts. Bowie followed it with the Top 20 smashes "China Girl" and "Modern Love." The videos for all three became MTV staples in the channel's nascent years. A sold-out arena tour and the cover of *TIME* followed, as did hit collaborations with Tina Turner ("Tonight") and Mick Jagger ("Dancing in the Street"). But as Bowie's popularity grew, he seemed to lose touch with his muse.

The many phases of Bowie, clockwise from top left: in 1967, just after he changed his name from Davy Jones; performing as Ziggy Stardust in London in 1973; in concert in the U.S. in 1983; and photographed in 1973 in Paris for the cover of his album *Pin Ups*

No longer a cult icon, the megastar embarked on a massive tour dubbed *Glass Spider* in 1987. Filled to bursting with stage props, theatrical vignettes, film clips and dancing girls choreographed by Toni Basil, it was an exponential leap forward from anything he had attempted with *Ziggy* or the Duke. At least 2 million people reportedly saw him perform that year, but critics weren't kind, charging that pretension had overshadowed ambition. Exhausted by the end of the tour, Bowie himself wondered if he had overreached.

**BOWIE**, who took his stage name from frontiersman Jim Bowie's double-edged hunting knife in the 1960 movie *The Alamo*, was born in 1947 to the former Margaret Mary Burns, a waitress known as Peggy, and Haywood Stenton Jones, who did marketing for a children's charity and was called John. With his parents and a half brother, Terry Burns, David grew up in the London suburbs of Brixton and Bromley when England was still rationing food and clearing rubble left by German bombs. When David was around 8, his father brought home a trove of rockabilly singles, including "Tutti Frutti" by Little Richard. He was immediately hooked. He taught himself to play ukulele, piano and tea-chest bass, which allowed him to participate in local "skiffle" jams, playing the same British-inflected version of American folk music that inspired Lennon, Paul McCartney and George Harrison to form the Quarrymen in grade school. When an instructor at Bromley Technical High School asked what he wanted to be, David's answer was unwavering: he wanted to be "the British Elvis."

In 1964, he joined a band called the King Bees as sax player and soon became lead singer. Redubbed

  
**I received an email from him seven days ago. It was as funny as always, and as surreal, looping through word games and allusions and all the usual stuff we did. It ended with this sentence: "Thank you for our good times, Brian. They will never rot." I realize now he was saying goodbye.'**

BRIAN ENO,  
producer of Bowie's  
"Berlin trilogy"

Davie Jones with the King Bees, they recorded a single, "Liza Jane," and landed a spot on the popular British TV show *Ready Steady Go!* But David remained restless. It wasn't until 1971 that an explosion of creativity fueled not only his breakthrough solo albums but also hits for Mott the Hoople ("All the Young Dudes," which he wrote) and Reed (the album *Transformer* and its single "Walk on the Wild Side," which he produced). He also put his imprimatur on the Stooges' highly influential proto-punk album *Raw Power*, remixing it for his pal Iggy Pop. Five years later he produced, wrote or co-wrote nearly all the songs on Pop's first two solo albums, including the now classic "Lust for Life" and "The Passenger."

The '70s were an era of artistic triumph for Bowie, but they were a scourge on his personal life. He developed such a powerful addiction to cocaine that by 1975, paranoid and out of control, he considered suicide while living on his own in Los Angeles. His erratic behavior was captured in the BBC documentary *Cracked Actor*, which aired in the U.K. just weeks after his 28th birthday. "I was so blocked ... so stoned," he later recalled. "When I see that now I cannot believe I survived it. I was so close to really throwing myself away physically, completely."

While he had always had an open relationship with Angela, their marriage grew strained as they delved into the excesses of stardom. By 1976 they had separated and were waging a protracted custody battle over their 5-year-old son, Duncan Zowie Haywood Jones. Bowie moved to Lausanne, Switzerland, and then to Berlin to wean himself from addiction. By 1980, when he finalized his divorce and finally won custody of Duncan, now a well-known film

## The 'Picasso of rock 'n' roll'

The first time I heard the name *David Bowie* was the coolest way to be introduced to an artist. I went to a restaurant in Miami Beach in the early 1970s, and the girl who was a photographer for the restaurant invited me to go with her to a nude beach and sleep under the stars naked and hear her favorite artist. Of course I complied! We lay on the beach all night listening to the *Ziggy Stardust* album. After that, how could I not be a fan? She was fabulous, the music was great. I couldn't get "Suffragette City" out of my head. I don't think I ever told David that.

David and I first met in a club called the Continental in New York. I walked in with Billy Idol around 5 a.m., and we spotted him at the same time. Billy said, "Bloody hell, it's David effin' Bowie!" I walked over to David and started chatting with him. Within



Bowie and Rodgers in 1983

two seconds, we spiritually and artistically connected, and I don't remember speaking to anyone else the entire night. We spent the whole night talking about jazz. David knew jazz almost on the level of a musicologist.

Working on the album *Let's Dance* in 1982 totally changed my life, and it totally changed his life. I was only a few weeks from being cut from my label. It was him and me against the

world. We did it by ourselves, and he funded the project. It was the easiest record I ever made. It took 17 days from start to finish—from the moment we walked into the studio to day 17, the record was mixed and finished and never touched again.

We finished so quickly because we were on the same wavelength and half the songs were already written: "China Girl" had come out with Iggy Pop, "Criminal World" was a song by another band, Metro, and "Cat People (Putting Out Fire)" he had done with Giorgio Moroder for the film *Cat People*. The fact that David could take old songs and reinvent them in a new way gives you a great idea of how he saw the world. I call him the "Picasso of rock 'n' roll"—he saw things from a different perspective. If I showed him a pineapple, he'd say, "Wow, that's fantastic, but did you see this?" Even if we were looking at the same thing, he'd see something new. —Nile Rodgers, producer of *Let's Dance*, as told to Nolan Feeney



director, he had kicked the habit.

That year, with new vigor, Bowie addressed his legacy in songs like “Teenage Wildlife,” which took swipes at the new-wave artists who had stolen every page in his style book. In “Ashes to Ashes,” he once again sang of Major Tom, only now the astronaut was “a junkie, strung out in heaven’s high, hitting an all-time low.” The haunting song and its groundbreaking video gave Bowie his first No. 1 hit in England.

After the success of his foray into mainstream pop, Bowie made yet another stylistic about-face. He started a band called Tin Machine with guitarist Reeves Gabrels and brothers Tony and Hunt Sales on bass and drums. They made a hell of a racket on their 1989 debut, wreathing their songs in peals of distortion with a grinding backbeat. American pop radio couldn’t stomach it, but it marked the beginning of Bowie’s last phase as a musician—one who would explore any number of sonic highways without worrying about charts and sales. His position in the pantheon was established, and following his 1992 marriage to supermodel Iman and the birth of their daughter Alexandria “Lexi” Zahra Jones eight years later, he seemed genuinely happy.

Throughout the ’90s and early aughts, Bowie seemed to be taking a victory lap. His work was adapted and performed by artists from Philip Glass to Kurt Cobain. In 1995, Bowie reunited with Eno to record the challenging *Outside*, then his most critically acclaimed album since *Let’s Dance*. The following year he was inducted into the Rock and Roll Hall of Fame. In 2002, *Heathen* found him incorporating elements of electronic music. Once again, Bowie played for young audiences when he embarked on a tour with another admirer, Moby. But at a festival in Germany in 2004, he suffered a heart attack and later had surgery to clear a blocked artery. So began a long period of quiet.

▲  
After the huge success of *Let’s Dance*, Bowie performs at a 1983 concert in Buckinghamshire as part of his *Serious Moonlight* tour

**A DECADE WENT BY** before Bowie recorded another album. It appeared to arrive from out of the blue with a bittersweet song and music video called “Where Are We Now?” which referenced his time in Berlin in aching tones. The cover of 2013’s *The Next Day* was an elegant joke: it took the album art from *Heroes* and superimposed a large white square over Bowie’s face. The message: I may be looking back, but I am not resting on my laurels.

Fans hoped Bowie might re-emerge to perform the songs live, but it was not to be. His last time on a public stage had come seven years earlier when he sang “Changes” with Alicia Keys at a charity fundraiser. Instead, Bowie granted London’s Victoria and Albert Museum access to his personal archives, from which the show “David Bowie is” was mounted with more than 300 objects—handwritten lyrics, photographs, instruments and costumes. The show has been staged in eight countries, is currently on exhibit in the Netherlands and moves to Japan next year.

At a dinner to celebrate the London opening, Tilda Swinton told of how at age 12 she carried a copy of *Aladdin Sane* for two years before playing it. “The image of that gingery, boney, pinky, whitey person on the cover with the liquid mercury collarbone was—for one particular young moonage daydreamer—the image of planetary kin, of a close imaginary cousin and companion of choice,” she said, echoing the sentiments of generations of Bowie admirers.

Finally, *Blackstar* arrived with a startling video for “Lazarus,” with Bowie portrayed as a hospital patient with a blindfold over his face and buttons where his eyes should be. In its final scene, the singer stands before us, his voice quavering, before hiding himself away in a dark cabinet. His spark may be extinguished, but his last gesture invites us to open the door and see this dear Lazarus come back to life. □



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# Time Off

'TEDDY ROOSEVELT CHANGED THE SYSTEM AND STILL COULDN'T BEAT THE ODDS.' —PAGE 65



Lewis, an Emmy winner for *Homeland*, enters a world more treacherous than the CIA: *Wall Street*

## TELEVISION

### Wall Street soap *Billions* is bullish on drama, bearish on insight

By Daniel D'Addario

PAUL GIAMATTI AND DAMIAN LEWIS are actors who excel at opposite things. Giamatti, in the years since he broke through to mainstream fame in the 2004 film *Sideways*, has been regularly and memorably blowing his stack on screens big and small; no one does petty fury better. Lewis, meanwhile, brought to his three-season run on *Homeland* an inscrutability that made that show's ditherings work far better than they otherwise might have. Giamatti is always bordering on too much acting; Lewis has you convinced he's not doing enough, until the plot shifts.

The pair are locked in an endless face-off on the new Showtime drama *Billions*, premiering Jan. 17. As U.S. Attorney Chuck Rhoades, Giamatti is bent on investigating Lewis' Bobby "Axe" Axelrod, a hedge-fund leader for

whom extravagant purchases—from a \$63 million home to the college tuitions of his late colleagues' kids—are mundane. Socially, the two circle each other warily, a tense relationship facilitated by the fact that Rhoades' wife Wendy (Maggie Siff) works as a performance coach at Axelrod's firm.

That conflict of interest is absurd on its face. But happily its centrality to the narrative pushes Giamatti to new heights of acting excess, as he sputters in anger at his own futility. In general, *Billions* chooses furthering the plot over fealty to realism just about every time. It's a mixed bag, but one that generates real sparks between the rich man and the man tasked with investigating him.

And there are still occasional sharp pieces of reality that manage to

provoke—the private-jet trip to bro out with Metallica, Wendy instructing her hedge funders to recite their salaries as a self-esteem move. Greed, here, isn't good; it's numbing. Axelrod doesn't seem to enjoy his money. He seems dedicated to lavish sprees just to rile Rhoades up.

Reminiscent of *Entourage*'s more decadent moments, the character's slavish service to the id is boring in its particulars yet makes for compelling pop psychology. We learn that his pursuit of wealth and power follows directly from growing up poor, an easy but satisfying puzzle to solve, though Lewis' remoteness persuades us there's something more subtle at work. The question of what, really, Axelrod is hiding about his career in the early years of the 2000s—he was the only survivor of 9/11 at his firm and is the subject of murmurs from other characters about perceived profiteering from grief—is the show's most interesting one.

Giamatti gets significantly less to do; there's "easy but satisfying" and then there's the obviousness of his character's being into sadomasochism, as we see in the show's opening moments. Rhoades is obsessed with punishment, he feels he lives in the shadow of his father, and he shares his wife (in a sense) with his primary nemesis. These characteristics haven't been seen before in this particular combination, but it still feels as though they were plucked from the antihero-TV magnetic-poetry set.

After all, we're still trapped in the cultural moment *The Sopranos* kicked off, in which scripts about the inner lives of morally convoluted men rose to the top of network executives' piles, to diminishing returns. Many of these shows (recently, *Better Call Saul* on AMC) have been very good, but there has to be more than one way to tell a story than just over and over, through the eyes of an ultra-competent man.

To wit: Wendy may not be a character whose loyalty makes sense, but I

wanted to see more of her perspective. And in the pivotal role of Lara, Axelrod's wife, Malin Akerman is both miscast and hazily written. Akerman, the lone ray of sunshine from HBO's *The Comeback*, is not the actress to carry across Machiavellian. And Lara is saddled with such overt hostility (and with a bizarre monologue about a hardscrabble upbringing teaching her toughness) that she feels more like a male writer's idea of a harridan than like a character we want to follow.

Lara, off doing her own thing while Rhoades and Axelrod do battle and Wendy anxiously coexists with them both, is a particular problem for the show. An entire episode sees her carrying out an elaborate plan to ruin a rival, including ensuring that rival's son gets rejected by the college of his choice. The viewer may end up as bored as Axelrod is when he looks at his bank statements. If absolutely everything is possible, then where's the fun?

There's an

empty-calorie feeling here, as spectacle grows less thrilling without insight backing it up. It's a missed opportunity. We're awash in shows about lawyers and cops, crooked and straight, but the financial industry exists outside TV's gaze, despite its outsize influence. That's not least because they're hard for laymen to understand (as the recent film *The Big Short*, with its cutaways to stars explaining collateralized debt obligations, made clear). So it's no wonder *Billions*, with two game stars, defaults to splashiness over insight. *Billions* resembles no show more than *House of Cards*, a post-*Sopranos* series designed to look and feel serious but one that excels primarily at presenting outrageous plot points. Like *House of Cards*' take on politics, *Billions*' look at Wall Street has little coherent to say besides "Power is a bad thing—and fun too." It's that last clause that keeps this show from junk-bond status.

*Sundays at 10 p.m. E.T. on Showtime*



Giamatti is perfectly peevisish



## REVIEW

### Tolstoy, told with 21st century flair

*Downton Abbey* may be in its final season, but the pipeline of prestige TV flowing west across the Atlantic is a renewable resource. The BBC's miniseries adaptation of *War and Peace*, airing in the U.S. on three related cable networks, is a surprisingly muscular adaptation of a book that's sitting on many readers' to-do lists.

The war in question feels both senseless (we're thrust into Napoleon's invasion with little more than a squib of onscreen text for context) and upsettingly real. And the moments of peace are hardly peaceable, given the currents of vanity and greed that motivate complex characters played by Gillian Anderson,



## WAR STARS

Anderson, with Stephen Rea, plays Anna Pavlovna Scherer, a salon hostess in 19th century St. Petersburg

a perfectly sly schemer, and Paul Dano, torn between youthful ideals and a growing sense of his adult power.

This is one of those shows in which Russians speak with British accents, but given the pacing, you'll barely have a moment to think about it. Even scenes off the battlefield give the impression of walls closing in; one needn't know the details of European history to get the sense that an era is ending.

The ambition on display is laudable; Leo Tolstoy's novel is transformed into an entertainment product that moves with 21st century briskness. Maybe it's time for Americans to send the U.K. some TV that merges literary class and gritty fun with such ease. Matthew Weiner's *Rabbit, Run*, anyone? —D.D.

*Mondays at 9 p.m. E.T. from Jan. 18 to Feb. 8, on A&E, History and Lifetime*

## TELEVISION

### Rashida Jones is TV's new good cop

EVERY COMEDY NEEDS A GOOD STRAIGHT woman—the one person who keeps her head amid chaos. Rashida Jones honed that skill on *The Office* and *Parks and Recreation*. Now, on *Angie Tribeca*, she's as delightfully deadpan as ever, even as circumstances test the limits of reason. Jones plays a Los Angeles police officer who's impersonal, brusque and work-obsessed: a common type. (There's one like her, played by Stephanie Beatriz, on *Brooklyn Nine-Nine*, TV's other great cop comedy.)

On Jan. 17, TBS will air the complete first season of *Tribeca* during 25 hours of commercial-free repeats. Then the 10 episodes of Season 2 arrive weekly starting Jan. 25. It's an offbeat decision that makes sense; like any good procedural, the episodes are formulaic enough to foster addiction.

Merging familiarity with absurdity is what *Tribeca* does best. All TV cops have a hard time letting things go; Angie keeps a dead fish in a tank on her desk, because she's pretty sure he's just sleeping. And it wouldn't be a cop show if a case didn't get personal: Angie attempts to nab a perp by staging a fake wedding with her partner (Hayes MacArthur), who turns out to be harboring feelings for her. Unlike the more earthbound *Nine-Nine*,

this show has nothing to say about police controversies. It's about TV cops, not real cops, and better for it.

I considered bailing after the first appearance of a dog that does police work like a human. But Jones' heroic commitment helps

*Angie Tribeca* maintain its balance. She's playing Mariska Hargitay on *SVU*, but in a world where the crimes are low stakes and easily tied to puns. It's a performance that never breaks. But you'd be forgiven for watching the season all the way through, again, just to make sure she doesn't. That's just good detective work. —D.D.

*Mondays at 9:30 p.m. E.T. on TBS*

*In an utterly loopy world, Jones keeps a straight face*



## REVIEW

# In the midst of atrocity, *Son of Saul* seeks grace

By Stephanie Zacharek

IN A MOVIE, ONE FACE CAN BE EVERYTHING. IN *Son of Saul*, set in Auschwitz in 1944, Hungarian-born actor Géza Röhrig plays Saul, a member of the *Sonderkommando*, special groups of death-camp prisoners forced to dispose of the bodies of their own people before facing extermination themselves. Saul is on duty when a boy, near miraculously, survives the gas chamber only to be quickly put to death by a camp doctor; an autopsy is ordered, to determine what made him so tenacious. Saul witnesses all of this and becomes consumed with saving the child's body from the knife—a postmortem would be considered desecration under Jewish law—and finding a rabbi to recite the mourning prayers of the Kaddish.

In the context of the surrounding horrors, it's a fool's errand. But everything in Saul's face—a haunted woodcut, painfully alive to everything around him—tells us that this small but highly risky gesture is imperative. It's the last thing that can keep him human.

There's no way to describe *Son of Saul*, winner of the Grand Prix at last year's Cannes Film Festival, without making it sound like one of those movies you know you ought to see but will find any excuse to avoid. But if it's a demanding film, in the end, it isn't a despairing one. *Son of Saul* doesn't give the audience anything so falsely comforting as a happy ending—how could it? But it treats suffering as a living, breathing entity, not just as a dramatist's tool or a means of punishing an audience. Its director and co-writer, Hungarian filmmaker László Nemes (making his feature-film debut), isn't just re-creating unspeakable sadness but imbuing it with somber energy.

For all its intensity, *Son of Saul* is never ponderous. It moves so quickly and relies so little on dialogue that you need to race a little to keep up with it and to keep your eyes open every second of its 107 minutes. Still, you should brace yourself for the experience of watching it. Nemes keeps the camera moving almost constantly, focusing mostly on Saul's face, though also quite often on his back—he wears a gray coat with an X marked on it, and there's no way to avoid fixating on it. We follow along, seeing what he sees. Disturbingly blurry images often lurk just on the periphery: corpses still pink with life are dragged as if they were animal carcasses; camp officials refer to them as “pieces.” And the movie's sound design is distressingly effective—the victims' screams may be muted, but there's no blocking them out.



## WHEN ART IMITATES ART

French artist David Olère documented his time as a *Sonderkommando* at Auschwitz. *Saul's* brutal depiction of camp life has been compared to his work

That's all the more reason to stick close to Saul, which is clearly the movie's design. He's our ever present guide on this tour of Hell, but a deeply humane one. It's almost as if he's trying to protect us too. And though his mission is noble, there's never any certainty that he's doing the right thing. Even as he strives to preserve the boy's soul, his fellow prisoners, knowing execution is imminent, are planning an escape. His obsessive pursuit threatens the whole undertaking. At one point a colleague admonishes Saul, “You failed the living for the dead,” and he's not wrong. Ambiguity swirls through the picture like sparks around a fire. Saul is making the only possible choice, yet it may not be the right one. In the midst of the unspeakable, what does the “right” choice even mean?

As Saul, Röhrig carries the weight of that uncertainty in his bony, rolling shoulders and in the depths of his eyes. With only a few TV credits to his name, he isn't an experienced actor. In fact, Röhrig is a poet and former kindergarten teacher who lives in the Bronx. But that could be what makes his performance so magnetic. You never get the sense that he's trying too hard—he has simply melted into the skin of the character. His eyes, instead of being glazed and dead, throw off a bruised, guarded radiance. A title card at the beginning of *Son of Saul* tells us that members of the *Sonderkommando* were also referred to as “bearers of secrets.” Saul is bearing so many. Perhaps it lightens his load to share them.

RÖHRIG: SONY PICTURES CLASSICS; OLÈRE: YOUTUBE; INARITU AND DICAPRIO: GETTY IMAGES; BASKETS: FX; BAND OF ROBBERS: GRANTAS VENTURES

## MOVIES

# The Golden Gremlins—er, Globes

FOR PEOPLE WHO CARE about movies, the Golden Globes are one of the most pleasurable awards ceremonies of the year. The low-pressure party setting makes it relatively painless for the celebrities attending. And the occasional curveball awards thrown out by the Hollywood Foreign Press Association shake up—for a time, at least—the carefully calibrated grids and spreadsheets of the Oscar prognosticators. The HFPA is sometimes the gremlin in the system, and thank goodness for that.

The Golden Globes push certain performances and pictures into the spotlight—even if those pictures don't happen to be *Spotlight*. The surprises this time included a trophy for Kate Winslet, for her supporting role in Danny Boyle's biopic *Steve Jobs*. Winslet's name hasn't simmered to the surface in any of the major year-end critics' awards—which means little, though you could read it as a mild indicator that in the crowded field of fine performances given by women in 2015, she was possibly overlooked because few seem to care much for the movie. So what? The HFPA voters let their freak flag fly in choosing her, so good for them.

Almost as surprising was Brie Larson's Best Actress in a Drama award for her performance in *Room*, as a young mother who strives to raise her son normally under extremely abnormal circumstances. The

buzz around Larson has been quieter than that around some of the other nominees, chiefly perennial Oscar contender Cate Blanchett (for *Carol*) and Saoirse Ronan for her performance in *Brooklyn*, which just about everybody seems to like. Larson is a charming, quietly persuasive performer—not always the sort who gets recognized—and this prize puts a nice, shiny glow around her.

Perhaps most surprising is that Tom McCarthy's potent newspaper drama *Spotlight*, seen by many Oscar watchers as a Best Picture front runner, took not a single Golden Globe. But *The*

*Revenant*, in which Leonardo DiCaprio plays a trapper's guide left for dead in the bitter-cold wilderness of the 1820s Western frontier, won three prizes: Best Motion Picture Drama, Best Director (Alejandro González Iñárritu) and, for DiCaprio, Best Actor in a Drama. Now, it seems, anything could happen on Feb. 28: DiCaprio may end up winning his first Oscar, thanks to that persuasively bushy beard and convincing consumption of bison liver. And the Old West may prove more resonant with Oscar voters than old-school newspaper journalism. —s.z.

## GOING GLOBAL

Iñárritu takes his second Golden Globe, DiCaprio his third



## TIME PICKS

### MUSIC

R&B singer **Brandy** kicked off 2016 with "Beggin & Pleadin," an upbeat, bluesy track with a hint of country twang, her first new song after a four-year break that included a stint on Broadway.



### TELEVISION

In the new Louis C.K.-produced FX comedy ***Baskets*** (Jan. 21), Zach Galifianakis plays a rodeo employee chasing his dream of becoming a professional clown.

### BOOKS

In ***The Man Without a Shadow*** (Jan. 19), Joyce Carol Oates explores the complex emotional and ethical terrain of a relationship between a neuroscientist and her subject, an amnesiac.

### MOVIES

The caper comedy ***Band of Robbers*** (Jan. 15) reimagines Tom Sawyer and Huckleberry Finn as present-day adults, trying to pull off the perfect heist with a crew of recruits.



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**People**

## BOOKS

## Two Roosevelts and a firebrand

By Lily Rothman

IN 1968, GEOFFREY COWAN'S EFFORTS as a young campaign worker failed to get Eugene McCarthy to the White House but succeeded at a perhaps larger task: changing how the Democratic National Convention picked delegates. Now, in his new book, *Let the People Rule*, he traces that primary system to its start.

It's a complicated story that Cowan keeps lively, mostly avoiding the he-said-he-said of old-timey politicking, but readers who dive in for a feel-good story of how Americans got to choose their parties' nominees may end up depressed if enlightened.

As the 1912 election neared, some Republicans were unhappy with incumbent President Taft. But it was unlikely that the party would pick a different nominee—not even Teddy Roosevelt, the popular ex-President whose charisma Cowan renders palpable. So Roosevelt encouraged states to set up primaries, as a potential win-win: more democratic than letting the local party machine choose convention delegates and a way for the people to pick Roosevelt even if the party wouldn't. As Cowan writes, "We often define democracy in ways that suit our own desired outcomes." That March in North Dakota, with the first direct presidential primary, a new path for candidates was introduced. It has endured for more than a century.

But so has institutional power. The Republican National Committee controls its debate schedules; the Democratic National Committee controls access to its voter data. And as history knows, popular opinion was no match for party bosses in 1912. The Bull Moose Party, founded by Roosevelt in response to Taft's convention victory, was no different. The most affecting section of Cowan's book depicts Roosevelt's camp debating how to treat black Southerners, who leave the party of Lincoln in hopes that the new party will be more inclusive, only to see Roosevelt's supposed populism subsumed by political calculations.

In these cases, questions were settled by the decisions of those who could

rewrite the terms of the debate. It's the political process as Hunger Games: no matter which tribute emerges as victor, the Game-maker has the power. Teddy Roosevelt changed the system and still couldn't beat the odds.

BUT ANOTHER ROOSEVELT COULD. PATRICIA BELL-SCOTT'S *The Firebrand and the First Lady* portrays the unlikely, largely epistolary friendship between Eleanor Roosevelt and Pauli Murray. Murray was one of the few black residents at a New Deal camp for women in upstate New York when she encountered the First Lady. She later became a high-achieving lawyer, author and civil rights activist, and a real friend to Roosevelt.

The book is slighter than Cowan's and occasionally feels fragmented, as Bell-Scott follows Murray from job to job, but it might do wonders for those feeling politically disenfranchised.

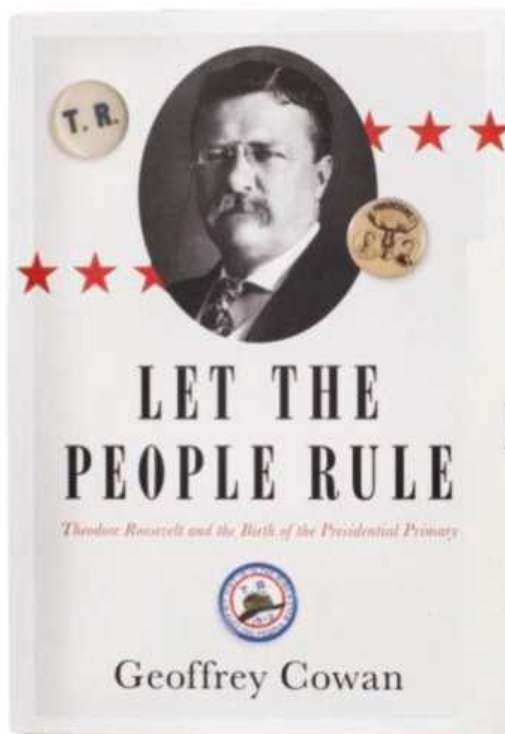
This Roosevelt had no desire to hold office, so she was able to follow her beliefs. Murray played a role in her evolution, and vice versa. Institutions still presented mighty barriers. Harvard Law rejected Murray on the basis of her sex, for example, and not even the White House could help. But Murray and Roosevelt were pros at moving forward, especially when they did so together.

These days "Some of my best friends are black" is a laughable response to accusations of racism, but not so in 1953, when Roosevelt wrote an essay in *Ebony* magazine called "Some of My Best Friends Are Negro." Those friends, Murray among them, offered hope that equality was possible. Even if the people can be ruled, the power of one person is abundantly clear. □



### BOLD MOVES

In 1954, after learning that the FBI had asked about her, Pauli Murray mailed J. Edgar Hoover her personal history and photo



Murray's book, *Proud Shoes*, came out in 1956

Star Wars actor John Boyega revealed that he **used to be a stock-photo model.**



**American hairless terrier**



**Two new dog breeds** have been added to the American Kennel Club's official roster.



**Sloughi**

**'I'm sure it's always seeping from my pores. I smell like a cabernet.'**

**JENNIFER LAWRENCE**, citing "red wine" when asked about her signature scent



Emma Watson asked her Twitter followers to help name her new feminist book club. Among their suggestions: **Watson Your Bookshelf.**

**A hoodie with a built-in inflatable pillow** has raised more than eight times its goal of \$30,000 on the crowdfunding platform Kickstarter.



**LOVE IT  
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TIME'S WEEKLY TAKE ON

WHAT POPPED IN CULTURE



Justin Bieber and his entourage were kicked out of a park in Tulum, Mexico, after **trying to climb the site's Mayan ruins.**



Katy Perry **wore a Bumpit** to the Golden Globes.



Brooklyn eatery Manila Social Club is **selling \$100 doughnuts**. They're topped with gold flakes and filled with jelly made from Cristal champagne.

Because of a delivery mix-up, a U.K. man received a FedEx package **containing a human tumor specimen**; he said he was expecting a Kindle.



More than a million people shared this **mathematically incorrect Powerball meme**, whose equation yields \$4.33 for every American—not \$4.33 million.

Golden Globes host Ricky Gervais caught flack for **making several transphobic jokes** and calling Caitlyn Jenner "Bruce."



DOGS: AKC (2); HOODIE: JAMES REESE—HYPNOS; DOUGHNUT: INSTAGRAM; POWERBALL: FACEBOOK; BOYEGA: PERRY; PILLOW: GERVAIS; JENNER, FEDER TRUCK, KINDLE, WINE, WATSON: GETTY IMAGES



THE AWESOME COLUMN

## If I had to suffer through slow dancing, so should today's teenagers

By Joel Stein

I FIGURED BY THE TIME I WAS 44, I WOULD PRETEND TO be disgusted—while actually being titillated—by teenagers' hoochie-coochie music, hoochie-coochie dancing, hoochie-coochie outfits and hoochie-coochie apps, which would allow them to instantly summon forth hoochie coochie. But instead, I am horrified by teenagers who don't do any of the following: have sex, do drugs, move out of their parents' home or get a driver's license, or have any idea if they actually like anything because they have to "like" everything.

I was at a bar, which is a place people go to in person to harm their bodies and say inappropriate things, when a guy told me he was a part-time DJ and was frustrated that young people don't slow dance anymore. I instantly understood that at the end of every empire, as we see the next generation disintegrate, each person must make a choice: do nothing, fight to save it or make fun of it in a column.

**WITHOUT THE AWKWARD SLOW DANCE**, I would be even more stunted in my ability to be a romantic partner. It is largely due to slow dancing that I know just how to avoid my wife's gaze when things get too intimate, and how to sense that it is not a good time for my hands to be there, there or there. If I persevered through the horror of slow dancing, today's teens could do it, especially since they no longer wear pants literally made of parachute material, which made things difficult in the 1980s since parachute engineers want to make sure that when someone is caught in a tree, their silhouette can clearly be discerned, which is the opposite of what you want when slow dancing with Danielle at Jewish summer camp.

Erick Mauro, who runs a company that throws parties on Long Island in New York, says he not only does not play slow songs at bar mitzvahs but doesn't even try them at weddings unless the parents demand it. And then all the young people just leave the dance floor. He says he'd love to help my cause but can't do anything. "If a Kanye West or an Adam Levine were to come out with a breakthrough slow-dance hit, it would be done," he says.

So I contact James Valentine, guitarist for Maroon 5, Levine's band, who was unaware of our national emergency. "How are kids not doing this anymore? That was the best part of the Mormon dances back in the '90s in Nebraska," he says. "We were actually instructed to keep a Bible's distance in between. Or a Bible and a Book of Mormon." I do not know exactly why that rule was created, but I'm guessing Joseph Smith once went to a barn dance in parachute pants.

It's been nearly 15 years since Maroon 5's ballad "She Will Be Loved" was released, and while the band has written a bunch of other ballads since then, they were all cut from their albums in the drive to get hits. Valentine unwittingly placed a virtual Book of Mormon in front of the nation's pelvises. So he



agrees to push hard to get a ballad on the next album. "I'll say it's for the kids," he tells me.

But I'm not sure we have that kind of time. So I find Anne Thomas Mathews, a junior and this year's prom chair for Charles D. Owen High School in Black Mountain, N.C. It's an important high school, Mathews explains, since it is 17th in North Carolina. When I ask her what it is 17th in, she pauses. "I guess academics. I'm not sure," she says.

**MATHEWS SAYS GETTING PROMGOERS** to slow dance will be difficult. "Most people just grind on each other," she says of the school's dances. I hadn't known about grinding. It sounds like the kind of thing I was hoping for, like slow dancing but fast and without dancing. It sounds, in fact, way more intense than what I do during sex.

But Mathews says that despite the name, grinding isn't all that intimate: "Grinding is just a big mosh pit of people awkwardly touching each other. If you break off into couples, it's more intimate." It takes some people decades, a few Craigslist ads and a lot of cocaine to realize that truth about grinding.

Mathews agrees to save her generation from being America's last by getting the DJ to play a few slow songs. "Last year they picked cheesy songs," she says. "I'm going to pick something awesome. I don't want to say something tasteful, because that implies I think I have better taste than everyone else. But something like that." In fact, she is leaning toward Ella Fitzgerald, which implies that she has better taste than I do.

So this May, at the 17th-most-something school in North Carolina, a revolution will start. Some brave teens will press their bodies together until they become a single unit wondering what both a tisket and a tasket are. They will awkwardly feel, through the thick fabric of their pants, the clear outline of each other's phones. And they will desperately wish they were doing anything else. Which is exactly what intimacy is. □

**Klaus Schwab** The founder of the World Economic Forum in Davos says the digital revolution demands a different, and more human, kind of leadership

**What will be the big topic at Davos this year?** We are at the tipping point of a whole variety of interconnected technological breakthroughs: robots, drones, intelligent cities, artificial intelligence, brain research. What differentiates the fourth industrial revolution is that it's not a product revolution. It's a system revolution. What we want to do in Davos is provide an overview of the implications of this revolution on governments, business and individuals. No one is thinking about long-term consequences.

**Like what?** If we do not want to be dominated by technology, we have to become a more human society. What leadership style, what capabilities, do we need to master all these technologies? I believe we need to emphasize the more human aspect in leadership as a counterweight to all of these technological advances.

If you think about what a human being is, we exist because of brains, soul, heart. What we can replicate in a robot is the brain. But you never will replicate the heart, which is passion, compassion. And the soul, which enables us to believe. The robot will never have the ability to believe in something. So perhaps we will have at the end of this revolution—possibly, possibly—a basis for a new human renaissance.

**Two events dominated the news late last year in Paris. One was a terror attack; the other was a landmark multinational agreement on climate change. Can you talk about both?** On terror: in the past you needed big armies to do a lot of damage. Today one individual can do a lot of harm. The fourth revolution will challenge the capacity of people to digest change. People will be overwhelmed by all of the change. So they look for simple solutions. Of course there are a lot of people selling those, in democratic systems and extreme societies alike.

**And climate change?** What happened was very positive. Governments and businesses worked together. When Davos began, we were trying to get all stakeholders to the table to work on problems. Paris vindicated the stakeholder concept. But we now have to move from validation to implementation.

**Immigration is a huge challenge all around the world right now—** It's another reason to emphasize the human dimension and the values we stand for. As far as Europe is concerned, I am worried. I belong to the first generation of Europeans. For us, the basic idea was no war again. Our first priority was a European identity, not a national one.

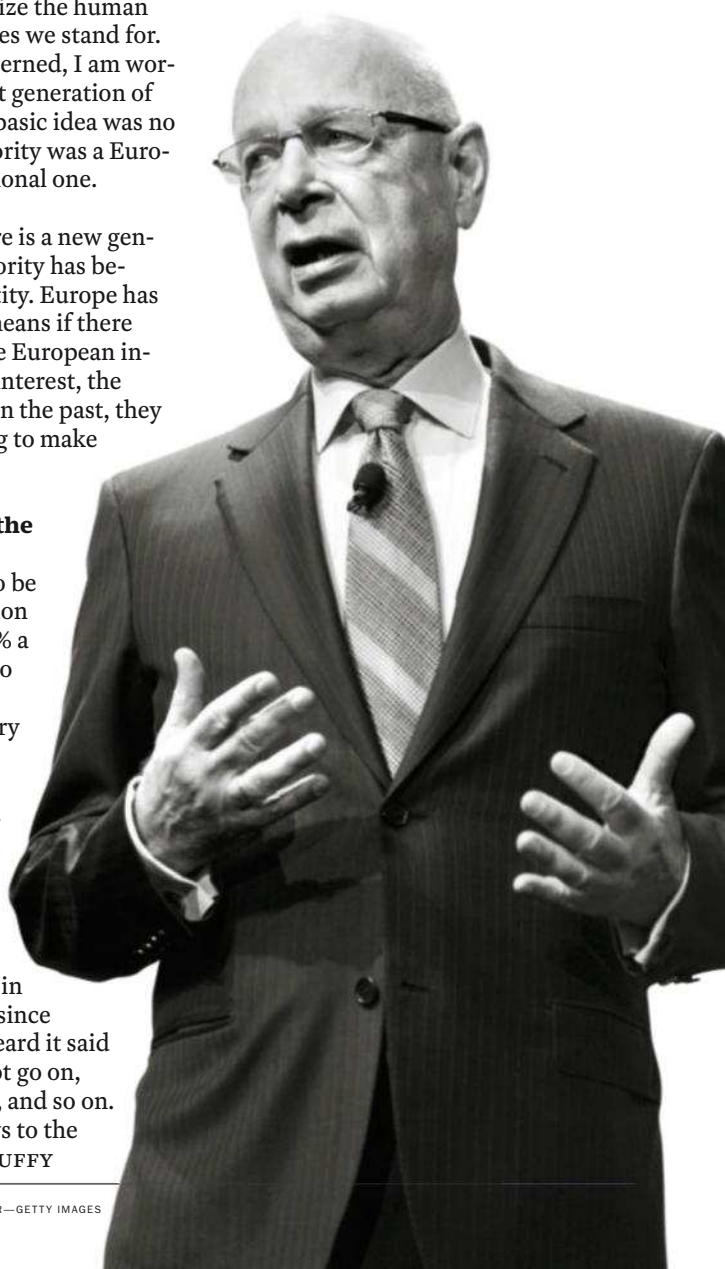
**Is that changing?** There is a new generation, and its first priority has become the national identity. Europe has become No. 2. Which means if there is a conflict between the European interest and the national interest, the choice looks different. In the past, they would have been willing to make sacrifices.

**What do you make of the uncertainty in China?**

China has now grown to be an economy of \$10 trillion in GDP. So if you add 7% a year, that corresponds to adding the entire economy of Switzerland every year. It is not sustainable. There is a natural tendency to slow down, and that is what we are seeing now. It is a challenge.

**Is it a manageable challenge?** I have been in China about 100 times since 1979. I have seen and heard it said so many times: It cannot go on, and China will collapse, and so on. China has proved always to the contrary. —MICHAEL DUFFY

**'The robot will never have the ability to believe in something. So perhaps we will have at the end of this revolution a basis for a new human renaissance.'**





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